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PNEUMONIA AND PLEURISY IN EARLY LIFE SIMULATING APPENDICITIS.*

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Attention has been recently called in several quarters to the simulation of appendicitis or peritonitis by pulmonary processes, especially pneumonia and pleurisy. The fact that this simulation often occurred has long been known, but is commonly overlooked, and, inasmuch as the diagnosis is certainly at times extremely difficult, and since operation for appendicitis has even been performed when only pneumonia was present, I have thought it of interest to report a few cases of this nature and to quote those of like sort which have come to my notice in medical literature, limiting myself entirely, at least in detailing cases, to the occurrence of the condition in early life. It is, indeed, at this time that the confusion is most likely to happen, although some cases developing later in life are also met in literature.

Of the cases reported here the first two have already been detailed by me in previous publications; the others have not. Two of them occurred in the private practice of Dr. H. R. Wharton, and the notes of them were kindly given me by him.

CASE 1.—*Mary Agnes McC.*, aged 8 years, admitted to St. Agnes' Hospital Oct. 27, 1893, suffering from chorea. On November 15 she became suddenly ill with very severe abdominal pain and tenderness and with such a marked appearance of some grave condition that the resident physician feared arsenical poisoning. The temperature was elevated, the pulse 170, and the respiration from 80 to 90 and very shallow. There was severe abdominal pain, with tenderness. The details of the condition as *reported to me* made me suspect peritonitis.

I examined her on November 16 and found that the abdomen was very much distended and tender; there was abdominal pain; the expression of the face was anxious, and the legs were held constantly drawn up in bed. The temperature had risen to 102. The rapidity of respiration combined with its shallowness appeared to be dependent on peritonitis, and several physicians who saw her with me agreed that this was the undoubted diagnosis. There was no cough. A physical examination of the lungs was made, however, as a routine, and to our surprise the upper part of the right lung was found to exhibit pneumonic consolidation. By the evening of the next day all abdominal symptoms had disappeared.

CASE 2.—Simon L., 4 years old, admitted to the Children's Hospital January 1[illegible], 1899. He was taken acutely ill on the 14th with obstinate constipation, abdominal pain and distension, and tenderness in the right iliac fossa. Cough was not noted, if present. The physician who saw him had already made the diagnosis of appendicitis, but the child was admitted to the medical wards, inasmuch as operation had been forbidden by the parents.

On examination on the 20th the child was found evidently in much pain; had an anxious expression of face, shallow respiration of from about 30 to over 40 per minute, and held the legs drawn up most of the time. The abdomen was not distended, but was tender in the right iliac region and everywhere rigid enough to make palpation difficult. As far as it was possible to determine no tumor was present. The temperature varied from 103 to 105. Except for a few coarse râles, nothing could be detected on examining the lungs in front. Owing to the great distress of the child, and because the diagnosis of appendicitis seemed so positive, the posterior part of the chest was not examined on this date. On the next day, the 21st, pneumonic consolidation of the left lung was easily found. The abdominal symptoms remained unchanged. On the 22d all abdominal symptoms had disappeared. Crisis occurred on the 24th.

In neither of these cases was there apparently any reason to suspect anything but an appendicitis, or a peritonitis secondary to this. In the light of later experience, however, one sees that certain suspicious symptoms were present. The height of the fever in the second case, and, especially the rapidity of the respiration, ought to have rendered me more cautious in diagnosis. It is certain that in the second case the child would have been at once transferred to the surgical ward for operation if this had been permitted by the relations, and that operation might have been done if a more careful examination had not been made.

CASE 3.—Myer M., 6½ years old, admitted to the surgical ward of the Children's Hospital March 17, 1900, supposed to be suffering from appendicitis and pneumonia, having been ill two days. The exact nature of the symptoms previous to admission is not recorded.

Examination on the 18th showed the abdominal walls tense and everywhere tender, especially on the right side, where the rigidity and tenderness were especially marked. The respiration was from 45 to 55, the pulse over 130 and the temperature from 103 to 104. Breathing appeared to be painful. Examination of the lungs showed slight impairment of resonance over the upper lobe of the left lung in front and of the lower lobe behind, yet nothing very characteristic or diagnostically positive was discovered. On the 19th the temperature was 103, the respiration from 40 to 50. The abdomen was distended and tympanitic, and the epigastrium and the region of the appendix were tender on pressure, and the left iliac region to a less extent. Abdominal pain was constantly present. but less than on the preceding day. The expression of the face was that of pain; herpes was present on the lips; the chest was tender everywhere on percussion. No change in the pulmonary condition is recorded. On the 20th the child was much brighter. The abdominal symptoms persisted, and physical signs of pneumonia of the right lung were very positive. By March 21 all abdominal symptoms had disappeared. There were now, however, evidences of some degree of pneumonia in both lungs, and the temperature was falling. By the 23d it was normal.

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* Read before the New Jersey State Medical Society.

This case was puzzling, not so much to determine the presence of a pneumonia, which was suspected before admission, but because it was considered that the disease was occurring conjointly with appendicitis. Operation was considered when he first entered the surgical ward. I was asked to see him on the 19th or 20th, and determined positively the presence of pneumonia. Experience with the earlier cases made me believe that the abdominal symptoms were referred entirely from the lungs. The later course of the disease appeared to render this unquestionable.

Case 4.—K. S., male, 7 years old, admitted to the Children's Hospital Nov. 2, 1899, under the care of Dr. H. R. Wharton. He had had at various times more or less abdominal pain, but never severe until three weeks previously, when he had a typical attack of appendicitis as regarded by the physicians in charge of him. The symptoms at the time consisted of severe pain and tenderness in the right side of the abdomen, especially at McBurney's point. fever, constipation and restlessness. He recovered partially, but the tenderness is said to have remained. On October 30, three days before admission, he had had a recurrence of pain, and again on November 1. There had been no vomiting at any time. Fever was said to have persisted since the attack three weeks before. On admission the temperature was 103, respiration varying from 32 to 80, and the pulse from 132 to 196. The abdomen was distended, tender and somewhat rigid. These symptoms were especially marked on the right side. There was also bronchial respiration over the entire lower lobe of the left lung. The attending physician had in person taken the child to the hospital in order to have an operation for appendicitis performed. On refusal by the surgeon to do this he became very angry, disputed the diagnosis of pneumonia, said he had brought the child for the sake of operation solely, and would remove him if it was not performed, and used other language more forceful than polite. He was requested to go to the ward to examine the patient himself again. This he did—and then apologized.

By the evening of the same day the temperature had fallen to 99.2. No further abdominal symptoms were recorded, and the pneumonic consolidation rapidly disappeared.

This case hardly needs comment. It shows how absolutely one may be deceived by the pseudo-appendicular symptoms unless careful study of other parts of the body is made.

Case 5.—Walter E. C., 11 years old, admitted to the Children's Hospital to the service of Dr. Wharton on Nov. 25, 1901. He was taken ill November 22 with vomiting, headache and pain in the abdomen. The latter soon became localized at McBurney's point and continued until the 24th, being so severe that he lay awake crying during the night of the 23d. There was fever and the bowels were constipated. Two well-known physicians of Philadelphia, one of them a surgeon, had seen him and made the diagnosis of appendicitis. On examination in the hospital the temperature ranged from 103 to 104 or more, the respiration from 40 to 55 and the pulse from 95 to 130. There were no certain symptoms of appendicitis discoverable, but a well-developed croupous pneumonia of the base of the right lung was found, and he was transferred to the medical ward to the service of Dr. F. A. Packard. By this time the principal pain complained of had shifted to the right shoulder. There was also pain in the right side and in the epigastrium, but none had been present in the right iliac region since the evening of the 24th. The epigastric pain persisted until the 27th, when the temperature fell by crisis. After this date the pain grew less.

By the time the child reached the hospital the change in the locality of the pain had removed some of the difficulty in diagnosis. It is to be noted that the physical signs of pneumonia were developed at the time of entrance.

The next case is not so characteristic an example of the likeness of appendicular pneumonia to appendicitis. The child was admitted, it is true, for appendicitis, but this diagnosis was promptly corrected.

Case 6.—Elmer W., 8 years old, admitted to the Children's Hospital May 8, 1900, in the service of Dr. F. A. Packard. He had wakened in the early morning of May 4 with fever and vomiting. Constipation, fever and cough continued from this date. For two days there had been pain in the right side. Examination showed the eyes sunken, the knees drawn up, the abdomen distended but not tender, frequent cough, temperature 103, respiration from 35 to 45, pulse from 140 to 170, pain in the right side of the thorax, and physical signs of pneumonic consolidation of the right lung. The temperature fell by crisis on the 9th.

The only suspicious symptoms in this case were the sunken eyes, distended abdomen and the drawing up of the legs, pointing toward abdominal disease. The diagnosis, however, was unattended by difficulty.

The following two cases were seen by Dr. H. R. Wharton in his private practice, and kindly submitted to me by him.

Case 7.—Boy 15 years old, seen in consultation, a diagnosis of appendicitis having been made, and Dr. Wharton having been called for the purpose of operating. There were pain in the right iliac fossa and continued high temperature. Examination showed some rigidity of the right rectus muscle, and much tenderness on pressure in the region of the appendix. Further examination, however, showed consolidation of the right lung. The presence of appendicitis was excluded. The abdominal symptoms promptly disappeared, and the child passed through an ordinary case of croupous pneumonia, terminating in recovery.

Case 8.—Boy 8 years old, who for nearly a week had had severe abdominal pain, particularly in the right iliac fossa. Dr. Wharton was called in consultation on the sixth day of the disease, the diagnosis of appendicitis having been made and operation being desired. The symptoms pointed to disease of the appendix, but it was noticed that the respiration was quite rapid. Examination of the chest revealed the presence of pleural effusion. This later became purulent and ruptured into a bronchus, the symptoms of appendicitis meantime having disappeared. Resection of the rib and drainage of the empyema was required later. Recovery followed.

Cases occurring in children and reported in recent literature have been multiplying so rapidly that I can give but the briefest synopsis of those which have come to my notice. There is no doubt that a careful search of the older literature would show more extended references to the condition, with illustrative cases, than is ordinarily supposed.

1. Fenwick (*Lancet*, 1893, Vol. ii, p. 79) reports 1 case.

Boy of 13 years was suddenly attacked with severe abdominal pain, vomiting and faintness after a long walk. In a few hours he became delirious. On the next day he was found to have fever, with a temperature of from 102 to 106, pulse 36, herpes on the lips, rapid respiration, occasional short, dry cough, considerable abdominal pain and tenderness and rigidity, especially in the umbilical and left lumbar regions. The legs were drawn up in bed. Nothing abnormal was discovered in the chest. Vomiting continued troublesome, and the delirium gave place to stupor. On the third day all the symptoms improved greatly, and dulness at the left base behind, with impairment of the respiratory murmur, was discovered. Improvement continued, and the abdominal tenderness disappeared to a large extent. The temperature reached normal in three days. Later, pleural effusion was found.

Four other cases were reported, all in adults. In all the symptoms pointed distinctly toward inflammation in the abdomen, but the disease appeared to be diaphragmatic pleurisy. In two of the cases pleural effusion developed. In another the autopsy showed extensive involvement of the diaphragmatic pleura.

2. Morse (*Annals of Gynec. and Pediat.*, 1897) reports 3 cases.

(A) Boy of 7 years. A blow in the abdomen was followed soon by faintness, nausea and vomiting. The next day nausea, headache, pain in the abdomen, constipation, slight fever and slight abdominal distension and tenderness developed. Examination of the lungs was negative. The abdominal pain and tenderness increased, especially in the right iliac region, with slight dulness there. Respiration and pulse were rapid, the temperature was high, and there was a constant hacking cough. Appendicitis was suspected. On the fourth day of the attack physical signs of pneumonia were well marked over the right lower lobe, the abdominal symptoms disappearing.

(B) Boy of 8 years had headache, slight abdominal distension and tenderness, constipation, rapid respiration and a temperature of 105. Nothing was found in the lungs. Vomiting occurred in the night, and on the next day there was slight cough and the abdomen was much distended and tender, especially on the right side. The examination of the lungs was still negative. Up to the sixth day of the disease the condition was the same. On this date the respiration became more rapid and painful, the cough increased, pain in the chest developed, physical signs of pneumonia of the right lower and middle lobes were found, and all abdominal signs disappeared.

(C) Girl of 3 years, taken ill suddenly with fever and abdominal pain. On the next day she vomited, had continued abdominal pain, but no cough. Seen thirty-six hours after the onset, the temperature was found to be 39.9 C., the respiration and pulse rapid, but nothing abnormal was found in the lungs. On the fourth day of the attack solidification of the left lower lobe was discovered.

Morse considers the occurrence of pneumonia with initial abdominal symptoms not uncommon. He says that the abdomen has been twice opened for appendicitis in children within the past few years by prominent surgeons in Boston when the trouble was really pneumonia. He believes that the sudden onset with high fever and rapid respiration should suggest pneumonia, even in the presence of abdominal symptoms and the absence of cough.

3. Guinon (*Bull. de la Soc. de Paris.*, 1901, p. 77) reports one case.

Girl of 13½ years, had had fever, headache and pain in the right side of the chest for about eight days before admission to the hospital. On the day after admission she exhibited an anxious expression of face, sunken eyes, pain in the right side of the abdomen with tenderness at McBurney's point, little cough, no dyspnea, no physical signs in the chest. The case was supposed to be appendicitis, but firm pressure with the flat of the hand showed no tenderness and no increased resistance, although sudden pressure with the finger-tip gave pain. For two days more the diagnosis remained uncertain, pain persisted and positive signs of pneumonia were found at the right apex. The temperature fell by crisis in the evening, and on the next day the abdominal symptoms disappeared and the physical signs of pneumonia throughout the right lung were positive.

4. Massalongo (*Riforma Medica,* 1901, 711) says that he has observed 4 cases in children of from 5 to 12 years in which pneumonia simulated appendicitis. He recalls 5 cases in which operation for appendicitis was done and the organ found entirely sound, the real disease being pneumonia.

He calls the condition pseudo-appendicular pneumonia and dwells on the difficulty in diagnosis which lasts until after the third or fourth day, by which time the abdominal symptoms lessen and the physical signs of pneumonia are liable to be detected. The pain is projected by way of the sympathetic and the spinal cord to the twelfth intercostal nerve.

5. Richardson (*Boston Med, and Surg. Jour.* 1901, April 17, p. 399) reports 5 cases in children.

(A.) Boy of 6 years, had for three days right lumbar pain, persistent vomiting and headache. On the third day a tense abdomen and right iliac tenderness were found, and the temperature was 105.5: On the fifth day the respiration was 40, the abdomen distended, the legs drawn up, the eyes sunken, and the general appearance bad. A diagnosis of appendicitis was made. On the sixth day the appendix was removed, but nothing of moment was found. Dyspnea and cough then developed, followed by empyema. He says that the case was one of pleurisy simulating appendicitis.

(B.) Boy 4 years old. On the second day there was abdominal pain, cough, and a temperature of 101, and appendicitis was thought of. On the third day pneumonia of the left lung was suspected. There was much pain in the epigastrium and in the left shoulder; the respiration was 42 and the temperature 105. On the fifth day symptoms suggestive of pneumonia, but not positive, were found. On the sixth day there was acute abdominal pain, constant in the region of the appendix. The abdomen was distended but not hard, with dulness in the right iliac region. The pain lasted several days and then disappeared. The final diagnosis was pneumonia of the left lung.

(C.) Girl, 5 years old, suddenly developed abdominal pain, which continued on the next day chiefly in the right iliac fossa, with a temperature of 104.4. Fever and pain diminished after ten days, but a little tenderness remained somewhat longer. About a week later pain and fever returned, appendicitis was thought of, and Dr. Richardson was summoned to operate. He found pneumonia of the right lung and tenderness along the course of the lower intercostal nerves. There had been no suspicion of the existence of pneumonia.

(D.) Boy of 4 years was attacked by cough, restlessness, fever, accelerated respiration, constipation and slight distension of abdomen. Nothing abnormal was found in the lungs. The condition continued, and on the eighth day the child developed abdominal pain, great tenderness over McBurney's point, and rapid respiration. Dr. Richardson was called in on the ninth day on account of suspected appendicitis. He found vomiting, severe abdominal pain, tenderness in the right iliac fossa, distension, but no rigidity. Operation was deferred. On the tenth day pneumonia was discovered, and the abdominal symptoms disappeared rapidly.

(E.) Girl of 7 years had had abdominal pain, fever, rapid respiration and cough for two days. On the third day the cough ceased, and on the fourth day severe abdominal pain developed, which disappeared, but left abdominal tenderness. Appendicitis and peritonitis were suspected. Examination on the fifth day showed tenderness over the appendix, no abdominal rigidity, a temperature of 104 to 105, and respiration of 40. The diagnosis was very uncertain, and operation was delayed. Signs of pneumonia were found the same evening.

Richardson also describes a case in an adult male brought to the hospital for abdominal operation. In a few days pneumonia was found.

He says that in acute right-sided diseases of the thorax the symptoms of appendicitis may be so simulated that a surgeon may be completely deceived. It was only his experience in the first case which kept him from operation in the others. The high temperature and rapid respiration are the most assuring symptoms.

6. Hampeln (*Zeitschr. f. Klin. Med.* 1902, 448) reports 5 cases, all in young adults and showing the most typical symptoms of sudden acute abdominal conditions. Collapse was present in some. In all the symptoms simulated peritonitis or intestinal occlusion.

7. Satullo (*Gaz. degli Ospedali,* 1902, xxiii, 757) reports 3 cases, all in adults. In all there was severe

pain in the right iliac fossa with an exceptionally high temperature, running from 43 to 44 C. at the maximum. It was only after several days of observation that the diagnosis of pneumonia was possible. Satullo designates the condition appendicular pneumonia, and says that pneumonia may begin with symptoms of acute appendicitis and the diagnosis be uncertain for three or four days. Pain at McBurney's point is reflex and is transmitted along the anterior branches of the twelfth intercostal nerve.

8. Barnard (*Transac. Clin. Soc. Lond.*, 1902, xxxv, 122) reports 2 cases in children.

(A). Girl of 11 years, had had some abdominal pain with vomiting during three days. When seen on the fourth day the temperature was 103.6, the respiration 40 and painful; there was tenderness in the right iliac fossa, abdominal rigidity, and constipation. Four days after admission obscure signs of pneumonia of the right base were found. The temperature fell by crisis this day, but rose again, and signs of diaphragmatic pleurisy developed.

(B.) Boy 10 years old, had been ill for two days with abdominal pain and vomiting, following a blow on the abdomen and the lower part of the chest. He was admitted to the hospital for acute traumatic peritonitis. Examination showed the abdomen distended, rigid, tender; the legs drawn up; constipation; a temperature of 99.5, soon rising to 103; the respiration 44, and the throat negative. On the next day undoubted signs of pleuro-pneumonia of the right base were found. Empyema developed later.

Four other cases are reported; one in a girl of 17 and three in men, in which severe abdominal symptoms were produced by pneumonia or pleurisy. In the case of the girl the diagnosis of perforating gastric ulcer had been made, and operation was performed, but no signs of this condition were found. On the next day physical signs of pneumonia of the right base were found. In the case of one of the men operation was performed for supposed laceration of the spleen from trauma, the symptoms being due in reality to a traumatic pleurisy of the left side. The two other cases exhibited symptoms of peritonitis dependent on the presence of pyopneumothorax.

Barnard refers to the fact that the older writers recognized the simulation of abdominal diseases by pneumonia or pleurisy. He speaks of cases reported by Andral and Fagge. He says that the relaxation of the abdominal walls with each inspiration, the rapid respiration, the absence of weak or irregular pulse, the fact that the tenderness is superficial and disappears under firm pressure by the flat of the hand, and the sudden high elevation of temperature speak against peritonitis and for pulmonary disease.

9. Comby and Zielinski (*Arch. de Med. des Enf.* 1902, 741) report 1 case.

Boy of 8 years was attacked suddenly by vomiting, abdominal pain, constipation and fever. On the next day there was a temperature of 39.3 C., an anxious expression of face, pain and tenderness on the right side of the abdomen, no cough, and nothing abnormal in the lungs. On the fourth day vomiting and distension of the abdomen developed. Appendicitis was thought of, but beginning physical signs of pneumonia of the right side were found. Crisis occurred on the seventh day.

The writers caution against an early diagnosis based on what appear to be appendicular symptoms. There should be increased muscular resistance and deep induration to justify the diagnosis of appendicitis.

10. Cozzolino (*Gaz. degli Ospedali*, 1903, xxiv, 45) reports 1 case.

Girl of 3 years was suddenly attacked by high fever, severe abdominal pain, especially on the right side, vomiting and anorexia. Examination on this day showed the child lying on the right side with thighs strongly flexed, great abdominal tenderness and pain, temperature of 39.7 C., pulse 150, rapid respiration, slight dyspnea, dry cough and constipation. She vomited during the examination. Practically nothing abnormal was found in the lungs. After much persuasion palpation of the abdomen was permitted; firm, steady pressure with the palm overcame the muscular contraction, and nothing abnormal was found at McBurney's point. On the next day the pain was slightly less; the cough little worse, and vomiting had ceased, and in the evening characteristic signs of beginning pneumonia of the right base were discovered. Abdominal pain slowly diminished, and disappeared by the sixth day.

He believes that pressure with the flat of the hand is a valuable aid in diagnosis, and dwells on the caution to be exercised in basing an opinion on the ordinary train of symptoms of appendicitis.

It is not necessary to review much further the individual cases or the general observations of the different writers as already quoted. There is evident a decided uniformity in most of the statements. They are in entire accord, too, with what the new cases I have reported show. There is, namely, especially in early life, a well-recognized, long-known, but frequently forgotten, tendency for patients with pneumonia or pleurisy to refer to the abdomen the pain really produced in the chest. This is more liable to happen when the disease is situated in the lower part of the thorax, but there is reason to believe that it may also occur when it has attacked the upper portion. It is also more deceptive when the right side of the thorax is affected, since the right side of the abdomen is then liable to exhibit pain, and the presence of appendicitis is suggested. Combined with the abdominal pain in these cases there is also constipation and abdominal tenderness and distension. These symptoms, together with the vomiting which quite commonly ushers in an attack of pneumonia in childhood, easily produce a clinical picture very closely simulating that of appendicitis.

The distinction is to be made by giving due consideration to (1) the sudden rise of temperature to 103 F. or thereabouts, and the tendency to maintain this degree; (2) the acceleration of respiration, which is out of proportion to the pulse rate or the pyrexia; (3) the relaxation of the abdominal walls between the respirations; (4) the diminution or the disappearance of tenderness on deep pressure with the flat of the hand; (5) the possible presence of cough. Finally, no operation for appendicitis should ever be performed until after a careful, or perhaps repeated, examination of the lungs has been made. All these points will, however, frequently fail to make the diagnosis certain, as the experience of some of the able observers quoted has shown.

Ozena of the Bronchi.—Béclère of Paris has observed several cases of a chronic bronchial affection similar to ozena of the nose. In some cases it was consecutive to measles, whooping cough or influenza, in others it was secondary to nasal ozena. In the majority the nasal passages were normal. All were improved or completely cured by intratracheal injections of peroxid of hydrogen and mentholized oil. Unilateral sclerosis of the lung with dilatation of the bronchi is the usual basis for the affection, as can be determined by radioscopy. If the latter is neglected the symptoms may suggest the erroneous diagnosis of a recurring vomica. The *Bull. Soc. Méd. des Hop.*, for June 25, contains Béclère's communication on the subject.

ABDOMINAL PAIN IN PLEURISY AND PNEUMONIA.*

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That a disease in one part of the body may call forth painful sensation in another part is a matter of every-day observation. Pain in the knee may mean hip-joint disease; the passage of a renal calculus may make pain in the testicle or penis; a gallstone may cause pain referred to the neighborhood of the right scapula; pain in the neck or left arm and hand may indicate angina pectoris and coronary sclerosis. While in pleurisy and pneumonia the pain is usually referred to the chest and to the side affected, it may be referred to points remote from the site of the disease, as to the opposite side or to the abdomen. This fact had not escaped the keen observation of our forefathers in clinical medicine. Laennec[1] speaks of the pain of pleurisy as sometimes shifting its place and "occasionally," he says, "from the beginning of the disease, we have a stitch on the right side and pleurisy on the left." Gerhardt also reports this fact. Huss[2] treated of this subject, explaining the pain on the other side by the occasional anastomosis of right and left intercostal nerves. Barnard,[3] who has lately written of abdominal pain in pleuropneumonic diseases, cites Andral, Watson and Fagge as clearly recognizing the fact that severe abdominal pain might have its origin in the pleura, and be misleading unless care were exercised in the physical examination. While several articles have lately called attention to the danger of confusing pulmonary and pleural diseases with peritoneal, this danger is not touched upon by many writers on diseases of the chest or abdomen, nor has it among practitioners of medicine and surgery the general recognition that it deserves. But the subject is well worth emphasizing. For in these days, when even the recent graduate stands ready to attack the appendix of every individual the moment there is right iliac pain, tenderness and rigidity, with fever, the seriousness of a mistake in diagnosis in a case of this sort is plain. This, then, is my excuse for presenting a subject that is not new.

The lower six intercostal nerves—the anterior divisions of the dorsal nerves—supply the abdominal wall, as well as a part of the parietal and diaphragmatic pleura. An irritation, e. g., from inflammation or pressure, in the course of one of these nerves might readily cause a pain that would be referred to the distribution of this nerve, i. e., to the abdominal wall. In cases of pleurisy how much of the irritation is produced by true neuritis is, perhaps, uncertain. By many intercostal neuritis is regarded as of common occurrence in pneumonia and pleurisy.[4] The eleventh nerve is distributed over the iliac region. Pain here would easily make one think of the appendix if on the right side, or if on the left, perhaps of the rarer left-sided appendicular pains. The other nerves would cause pain referred to the umbilical, epigastric or hypochondriac regions and the confusion that might result when we think of the possible significance of such pain in the way of ulcer of the stomach, gall bladder mischief, pancreatitis, etc., is clearly seen.

This close anatomic nerve connection between the abdominal wall, the pleura and the intercostal muscles is indicative of a physiologically intimate relationship, clearly seen in the common function of the thoracic and abdominal muscles in the act of respiration. Hilton's well-known law declares that the interior of a joint, the muscles moving it and the skin over the muscular insertions are supplied by the same nerve trunks. This law also applies to the pleura, which, he says, can be compared to a joint. And the muscles to be regarded as moving the joint are not alone the intercostals, but the abdominal as well.[5] Not only may pain of pleural origin be referred to the abdomen, but in their effort to lessen pain and to give the joint, i. e., the pleura, rest, the muscles remain quiet and may even be tense. One can readily understand how the tenseness of abdominal muscles, added to pain, may be deceptive because of the close resemblance to the phenomena of abdominal disease. And how strikingly like the picture of abdominal inflammation may be the combination of pain and rigidity when chilliness, fever, rapid pulse, etc., are also present.

There is still another possible explanation of some of the abdominal disturbances that are seen in pleurisy and pneumonia. The phrenic nerve in its course through the chest lays itself open to the attack of a pleurisy involving the pericardial, diaphragmatic or costal surfaces. This nerve is not solely motor. Henle, Luschka and others regard it as a mixed nerve. Van Gehuchten[6] says that in its course it gives off sensory fibers to the pericardium and to the pericardial, costal and diaphragmatic pleura, its terminal filaments furnishing sensation to the peritoneum covering the interior surface of the diaphragm.

Irritation or inflammation of this nerve, as in pleurisy, may perhaps be an explanation of some of the cardiac and gastric disturbances, the collapse and meteorism because the phrenic has communication with the vagus and the splanchnics. The halting movement of the diaphragm, as well as pain referred to the epigastrium and hypochondrium, may likewise be due to phrenic disturbance. Hampeln[7] advocates this view quite strongly, overlooking too much, as it seems to me, the part played by the intercostals in the production of abdominal pain.

It is not necessary to assume in cases of this sort that the inflammation is in the diaphragmatic pleura, i. e., in the part of the pleura anatomically nearest to the abdomen, though undoubtedly this part of the pleura is often inflamed. Rohrer[8] calls attention to the frequent occurrence of inflammation of the diaphragm itself, and believes that to this is due in part the stitch pain, as well as the pain in the abdomen often complained of, especially in children.

Head,[9] who has done so much to explain referred visceral pain, believes that in certain cases there may be abdominal pain when the lung alone is involved without the pleura, e. g., in bronchitis, tuberculosis or bronchopneumonia. He says that through the communicating branches of the seventh, eighth and ninth dorsal nerves, which branches supply the lungs, impulses originating perhaps in a small inflammatory pulmonary focus may be carried up to the posterior root ganglia. From the abdominal wall normal impulses pass from the epigastric and hypochondriac regions to these same ganglia. If, through the abnormal impulse coming from the lung, the ganglia have become disturbed in their function, the normal impulses from the abdomen may be distorted, i. e., misinterpreted, into painful impressions. Head tells Barnard (*loc. cit.*) that he has seen cases of this sort.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank A. Jones and W. S. Thayer.

[1] Laennec: Treatise on Diseases of the Chest, etc., Forbes Trans., p. 450.

[2] Huss: Deut. Archiv f. kl. Med., ix.

[3] Barnard: The Simulation of Acute Peritonitis by Pleuropneumonic Diseases, London Lancet, clxiii, Aug. 2, 1902, p. 280.

[4] *Fraentzel*: Ziemssen's Encyclopedia, Amer. Trans., iv, p. 632, inclines to the view that was held by Bean that intercostal neuritis is a common accompaniment of pleurisy.

[5] Hilton: Rest and Pain, reprint of second edition, p. 252.

[6] Van Gehuchten: Systéme Nerveux, i, p. 460.

[7] Hampeln: Zeitschrift für Klin. Med., xlv, p. 448.

[8] Rohrer: Maryland Medical Journal, September, 1902.

[9] Head: Brain, 1896. Also Brain, 1900.

Whatever may be the correct explanation of this abdominal reference of the pain in thoracic disease, the fact that such pain may occur should be clearly recognized by both physician and surgeon. While infrequent, it is more than a curiosity, and it is not so rare that it does not deserve a place in the symptomatology of these diseases.

ILLUSTRATIVE CASES.

I wish by brief reference to cases that have come under my observation, and then by reference to the experience of others, to show that this pain may occur, that it may be a misleading symptom, but that by care it generally permits of a correct interpretation.

In the pneumonia of children abdominal pain is common. The sudden onset with severe pain, fever and vomiting, with the tenderness and distension of the abdomen, make the resemblance to local or general peritonitis striking.

A year and a half ago I was called by two physicians to see a child of three to decide as to the advisability of operation for appendicitis. The history was, as I have stated, sudden abdominal pain, vomiting, high fever, tympanitic and tense abdomen. Yet the cough, expiratory grunt and rapid respiration were plain, as were the physical signs of consolidation of the left lower lobe. Later a pneumococcus empyema developed, healing under drainage.

In this case, as so often happens to us all, the attention had been riveted on the part of the body in which the brusque initial symptoms had appeared, and the later symptoms of trouble in another part of the body, though plain to one new to the case, were thus overlooked.

The lobe involved to produce this pain is not necessarily the lower lobe.

Feb. 22, 1902, I saw with Dr. Klein, a girl of seven years, whose pneumonia began with vomiting, pain and tenderness in the right iliac region, temperature 103, and in whom Dr. Klein found the next morning signs of consolidation of the right upper lobe. A typical pneumonia with high fever, 106, and migration to the middle lobe followed. At the time I saw her the upper and middle lobes alone were solidified.

The same abdominal pain in a left upper lobe pneumonia was present in a 6-year-old child seen with Dr. B. H. Chamberlin, March 12, 1902. The mother described it as "cramps in the bowels." In these upper lobe cases the explanation of the reference of the pain to the abdomen may be that of Head, of Hampeln, i. e., through the phrenic nerve, or that the pleurisy and accompanying neuritis may be more extensive than the anatomic boundaries of the lobe that is solid, i. e., may involve the lower intercostal nerves.

While in conversation with physicians, I have found some who expressed surprise at, or even unbelief in the onset of pneumonia with sharp abdominal symptoms. I have found many who regard abdominal pain as an important early symptom of pneumonia in children. Some writers on pediatrics are silent regarding that point. Others clearly recognize it, e. g., Baginsky, Henoch, DeMussy and Bouveret. Holt[10] refers explicitly to it in the following words:

> The pain is frequently referred to the loin, the epigastrium or to any region to which the intercostal nerves are distributed. In a recent case, in a boy of seven years, for the first twelve hours there was intense localized pain in the right iliac fossa, associated with such extreme tenderness as to lead to the suspicion that the case was one of appendicitis.

This will be the proper place, I think, to say a few words concerning pleurisy and pneumonia, coincident with or following abdominal disease. Coincident with or following an appendicitis, a pneumonia or pleurisy may appear, the abdominal and thoracic disease both due to the same cause, e. g., the pneumococcus, or the one being secondary to the other. Gussenbauer showed that from thrombosed veins accompanying intestinal obstruction embolic pneumonic foci could appear in the lung. And lately Sonnenburg[11] has fully discussed the similar embolic origin of pneumonia met with during appendicitis, before or after operation. These cases in which the abdominal pain is accompanied by, and probably due to, definite abdominal disease, do not properly belong in the category of those I am considering. But I mention them as in a given case the possibility of the coexistence of both abdominal and thoracic disease must always be kept clearly in mind, a condition not at all infrequent in tuberculosis, carcinoma or general septicemia.

A few months ago I was called to see a girl of about five years, who was regarded as in too weak and desperate a condition to undergo an operation for appendicitis and peritonitis, from which she was said to be suffering. The case was certainly a puzzling one. I was able to demonstrate clearly an extensive consolidation of the lower right lobe and a portion of the lower left. This had not been overlooked by the physicians. The respiration, temperature, mental condition were suitable for pneumonia. But a severe initial and continuous abdominal pain, a rigid, somewhat tympanitic abdomen and a persistent vomiting made the peritonitis seem probable. Yet careful inquiry into the history showed that within 12 hours of the onset the respiration rate had been 52. Palpation also led me to question the existence of a peritonitis, for with care, and by gentle, steady pressure, it seemed to me that there was less tenderness and less real rigidity than were consistent with the supposed extensive peritonitis. This case, illustrated too, I believe, the truth of Barnard's observation that there is a yielding or softening of the abdominal wall at the beginning of each inspiration in these cases where the pain is of thoracic origin. Medicine and food by the stomach being stopped for a few hours, and opium given, the vomiting ceased. There was in a few days a marked improvement in all respects. But convalescence was slow, with some cough, dullness and râles and signs of delayed resolution. No pus was found by a needle in a suspicious area in the right chest. During this convalescence, for a few days the patient had a distinct rigidity of the lower abdominal wall. A complete recovery ensued, the illness lasting altogether about seven or eight weeks.

I am inclined to regard the case as primarily and even solely pneumonic. Yet it is possible that there was here a simultaneous infection of the lung and peritoneum, or the peritoneum may have been involved after the lung, or vice versa. The slow convalescence with persistent abdominal pain was present in one of Richardson's cases.

Turning now to adults, we find that they may exhibit, though less frequently, the same abdominal pain with pleurisy or pneumonia, and this may simulate a peritonitis.

A young man of about twenty, with sudden abdominal pain and fever had some rigidity in the right iliac region. His physician with whom I saw the case found here a mass concerning whose exact nature he was somewhat in doubt. The possibility of appendicitis was naturally thought of. But he gave a dose of calomel, the mass disappeared, and in twenty-four hours a right lower lobe pneumonia was clearly made out.

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[10] Holt: Diseases of Infancy and Childhood, second edition, 1902, p. 563.

[11] Sonnenburg: Lungencomplicationen bei Appendicitis, Archiv. für Klinische Chirurgie, Bd. lxviii, p. 468.

I once showed a man in a clinic at the County Hospital with right iliac pain and marked friction rubs over the right chest. He had escaped an operation for supposed appendicitis only because he refused to permit it. Several times patients have been sent to the surgical wards from the examining room with the diagnosis of appendicitis when the more careful ward examination by the surgeon has shown the case to be pneumonia. I know of an instance in Chicago where the abdomen was opened for supposed appendicitis, when the whole trouble was a pneumonia unrecognized at the time of the operation, but which had caused symptoms that were regarded as those of appendicitis. I could cite several other cases in which abdominal pain has been a prominent feature in cases of pleurisy and pneumonia sometimes leading to perplexity as to the correct diagnosis. Thus a woman of 37 years with right pleural effusion told me that her trouble began twenty days before with a pain in the "stomach and side." In another case severe pain just above the crest of the ilium was present for two days before definite physical signs of pneumonia were present.

Dr. Bevan, in October, 1901, operated for me on a patient with acute appendicitis, draining a small abscess due to gangrenous perforation of the appendix. There was a slow but apparently complete recovery. From April to June, 1902, the patient was at her work as a nurse. About June 15, 1902, she had pain in the right chest, temperature 99 to 100. To this she paid little attention, but she became greatly alarmed when she had pain in the old region, i. e., at the site of the scar of the operation. Neither Dr. Bevan nor I could find local evidence for suspecting any recurrence of trouble in the region of the appendix. We thought the pain was referred from the chest in which could be clearly made out a pleural friction and the signs of a small amount of fluid. Within a few days all abdominal symptoms cleared up.

Still another case I may mention. A young lady with a large carbuncle of the upper lip, and with the grave constitutional symptoms attending it—the condition is, as is well known, generally due to the staphylococcus and often fatal—developed a severe pain in the right chest. In the latter location a friction rub with a fine crackling râle and a patch of harsh respiration could be made out. Nothing but the pain over the region of the appendix could be found suggestive of appendicitis, at least to Dr. N. S. Davis, Jr., and myself, who both saw the patient several times, though to some the probability of appendicitis seemed strong. The embolic pneumonic focus was evidently the explanation of the pain. There was ultimate recovery, the later history proving no appendicitis.

Twice I have seen pain referred very accurately to the region of the gall bladder, and the patients in both instances were sure there was cholecystitis, a natural interpretation, perhaps, when we consider that the one patient was a medical student and the other a physician, noted for being poor judges of their own ailments. The student had a right-sided pleurisy. The physician, in addition to the pain, had fever, local tenderness, and was jaundiced. He naturally concluded that he had gallstones and cholecystitis, though the whole trouble was clearly, as the sequel proved, a right lower pneumonia. In this case the pain was pretty definitely located at the point where the tenth rib joins the costal arch, close to the crossing of the parasternal line and the tenth rib, the *bouton diaphragmatique* of some writers. It should be regarded as suggestive of pleurisy, especially of the diaphragm, when this spot is the seat of pain or tenderness upon pressure.[12]

A patient whom I saw with Dr. F. S. Hartmann, was, after nearly two weeks, convalescing from an acute rheumatism and alcoholism when he was seized with a sudden excruciating pain in the upper left quadrant of the abdomen. Dr. Hartmann found him tender to pressure in the left hypochondrium; he soon vomited and became tympanitic. He did not, however, go into collapse immediately after the onset of the pain, and there was no marked perturbation of temperature. Three days later when I saw him, the tympany was less, the vomiting persisted and was grumous, there was an extensive pleurisy to be made out over the left chest, with a dullness and harsh breathing suggestive of pneumonia. The patient was rapidly failing, and died a few hours later. While no positive diagnosis was ventured by either Dr. Hartmann or myself, we both looked on the pleurisy as probably secondary to some subdiaphragmatic lesion—perhaps hemorrhagic pancreatitis or localized peritonitis from an ulcer of the stomach.

The autopsy made the next morning by Dr. H. G. Wells revealed nothing in the abdomen to explain the symptoms except a high grade of gastritis with submucous ecchymoses. Capillary oozing explained the blood in the vomitus. The left pleura was, however, the seat of an acute inflammation especially well marked over the diaphragm. The lung was edematous and congested with several hemorrhagic areas the size of a hickory nut. The blood showed a pure growth of a bacillus of the colon-typhoid group. Its exact nature was not discovered owing to an accident to the cultures, though the study of the organism as far as carried out made it seem probable that it was the typhoid bacillus.

Here was a case where the diagnosis should read as follows: Acute alcoholism, acute inflammatory rheumatism, typhoid (?) bacteriemia, acute pleurisy involving the diaphragm.

These cases will illustrate, I think, the importance of this occasional symptom of thoracic disease. That my experience is not unique I know from conversation with other physicians, and a few illustrative citations from the writings of others will be convincing on this point. Janeway[13] says he has several times been consulted in cases of pleurisy or pneumonia, where, because of the neuralgic pains reflected over the lower right abdomen, there has been entertained the idea of an operation for appendicitis. Osler[14] says that twice in cases of pneumonia he has seen the suspicion of appendicitis raised because of the sudden acute onset of the pain, once in the region of the navel, and once lower down on the right side. In discussing typhoid perforation, he[15] says: "Abdominal pain of a severe character in typhoid fever may be associated with an acute pleurisy."

This abdominal pain due to pleurisy I once saw in a typhoid. Because of its sudden occurrence and because of a sudden jump in the leucocytes my interne had naturally suspected perforation. Yet an absence of rigidity and of local tenderness and the presence of a fine pleural friction, with harsh localized breath sounds, led me to wait, and the autopsy two days later showed no perforation; but a bronchopneumonia.

Fraentzel[16] saw two cases of pleurisy that closely resembled peritonitis.

Cozzolino[17] refers to four cases reported by Massalongo last year in which cases of abdominal pain in children had aroused suspicion of peritonitis, though the trouble was intrathoracic. Cozzolino's own case was in a child of three years with symptoms like those of appendicitis, including tenderness over McBurney's point, though palpation that was *"dolce, lenta, graduale"* showed little pain and no induration. Next day pneumonia was plain. Guinon[18] also in his case found that gentle pressure with the flat hand and not the finger revealed less tenderness and less resistance than the previous complaint of the patient, a 13-year-old girl, would indicate.

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[12] Hampeln: Loc. cit., p. 435. Zulzer: Munch. Med. Wochenschr., 1898, No. 47. Fowler and Godlee: Diseases of the Lung, p. 670.

[13] E. G. Janeway: Remarks on Some of the Conditions Simulating Appendicitis and Periappendicular Inflammation. Medical Record, May 26, 1900.

[14] Osler: Practice of Medicine, fourth edition, p. 117.

[15] Osler: Lancet, Feb. 9, 1901.

[16] Fraentzel: Article on Pleurisy. Ziemssen's Encyclopedia, American Translation, iv., p. 63.

[17] Cozzolino: Gazzetta degli Ospedali e delle Cliniche, No. 5, 1903.

Morse[19] reports three cases in children, one of which was called appendicitis and another gastritis, though pneumonia was in each case, as the later history showed, the cause of the abdominal symptoms. He says: "Within a few years the abdomen has twice been opened in children by well-known Boston surgeons for appendicitis when the trouble was lobar pneumonia."

Brewer[20] reports an operation for appendicitis in a woman 30 years old, the abdominal pain, more or less general abdominal tenderness, slight muscular rigidity and distention, with leucocytosis, leading to this diagnosis. The abdomen was opened, but no sign of inflammation was anywhere discovered. The examination of the chest a few days later revealed a circumscribed pneumonia of the right lung, though prior to the operation there were no abnormal chest findings. Two weeks later and after the fever had subsided a small abscess immediately beneath the anterior abdominal wall of the left side, was opened. Brewer thinks that the pneumonic focus had induced the early abdominal symptoms.

He cites another case. A man convalescent from an acute lobar pneumonia, after being free from fever for six days, complained of pain in the right iliac region, vomited and developed fever. As he had years before had what was called appendicitis, a recurrence was naturally suspected. Muscular rigidity and tenderness became marked, the temperature rose, tympanites was extreme and the diagnosis of peritonitis was concurred in by Drs. Janeway, Bull and Brewer, who saw the patient with his physician, Dr. Evans. Because of the desperate condition of the patient an operation was regarded as inadvisable. The autopsy showed a normal peritoneum, a resolving pneumonia of the lower lobe of the right lung, a pneumococcus septicemia. How much of the abdominal pain and other symptoms were due to the pneumonic trouble and how much to the septicemia, it is impossible to say. Yet I cite the case here as an instructive one, and as showing the ease with which peritonitis can be simulated by other conditions.

Barnard's six cases in which abdominal symptoms were prominent, though no abdominal disease was present, deserve to be quoted in full, but lack of time will prevent this. Three were cases of pleuropneumonia involving the base of the lung. In two a pyo-pneumothorax developed, in each case apparently from rupture of a tuberculous focus in the apex of the lower lobe. One was a traumatic pleurisy with broken ribs. In this case the pleurisy was plainly recognized, but so definite were the abdominal signs that the abdomen was opened and found entirely normal.

The most interesting of these cases and one which, as Barnard says, was a most perplexing one, concerned a chlorotic girl of seventeen under treatment for ulcer of the stomach. A sudden violent epigastric pain, vomiting, collapse, rapid pulse, temperature 104.5 F., a tender abdomen, especially in the epigastric region, led to an almost immediate operation for perforated gastric ulcer. Nothing of the sort was found. On the second day after admission a right basal pneumonia was clearly made out, later also in the left base. The autopsy showed double basal pneumonia and right diaphragmatic pleurisy and "in the stomach a shallow ulcer of the size of a sixpenny piece, which was not even near perforation. There was no peritonitis." Surely this was a hard case to diagnose. As Barnard says, the sudden rise of temperature should have excited suspicion of somethinng else than perforation.

Hampeln's five cases are also worthy of careful study, he dwelling not only upon the possible misleading character of the referred pain, but upon the vomiting, tympany, collapse, etc., that he explains on the theory of disturbance of the phrenic nerve with secondary disorder of the vagus and splanchnics. Surgical intervention in some of these cases was narrowly escaped, and only because Hampeln's experience had led him to examine with unusual care for thoracic trouble. Hampeln's cases were, to quote his own résumé, "two fatal cases of foudroyant pleurisy with recovery, one fatal and one favorable case of croupous pneumonia, all in the beginning of the illness, creating the impression of a peritonitis or intestinal obstruction, while the ordinary marks of the real disease were absent, and even the physical examination, at least at the beginning, was negative." (loc. cit., p. 450.)

Dr. M. H. Richardson[21] discusses in a very frank manner the possibility of mistaking acute thoracic disease for appendicitis, citing instructive cases. He makes out the error in diagnosis as often due to the fixation of the thought of the observer on the one part of the body or on the one disease. Arguing from a psychologic standpoint, he says:

> For a true perception of the normal relation of things to be temporarily suspended, it is only necessary that the mind for the moment be dominated by a fixed idea. Influenced by a single suggestion or by a chain of suggestive circumstances, the mind may become so possessed of a certain idea that the result will necessarily be distorted and incorrect.

How true this is we all know to our sorrow, in more than single instances. I referred to this point in speaking of the child on whom operation was contemplated for appendicitis. The minds of the two physicians had, as Richardson says, become dominated by the fixed idea of appendicitis, though pneumonia was plainly recognized by both as soon as the possibility of its existence was pointed out. Barnard says the opinion that in his case of traumatic pleurisy there were abdominal complications was largely due to the fact that a few weeks before, with a somewhat similar injury and symptoms, there had been rupture of the spleen with hemorrhage. His mind was drawn, therefore, toward the possibility of a duplicate of this somewhat rare occurrence.

CONCLUSION.

There is little to say in conclusion. Cases may occur in which at first it may be impossible to say whether the trouble is abdominal or thoracic. Each case must be judged on its own merits, and the decision as to immediate operation or waiting, not settled by any hard or fast rule. Certainly in some doubtful cases with threatening abdominal symptoms, it would be better to err on the side of operation and make a laparotomy than to let a possible ruptured appendix, gall bladder, stomach or intestine go untreated for six or twelve hours. An exploratory abdominal incision could, perhaps, be made under local anesthesia or under laughing gas. This would avoid the danger of adding bronchitis, or aspiration pneumonia to an already existing pulmonary inflammation, if such happened to be the primary trouble and the peritoneum is found normal. If peritoneal trouble is found ether or chloroform anesthesia can be added and the reparative surgical procedure instituted.

But with care and circumspection doubt will seldom arise. The main safeguard in the diagnosis is to think of the possibility of a thoracic origin for the abdominal symptoms. It will then be generally found that there is some thoracic pain, as well as abdominal, or there will be cough or expiratory grunt, perhaps a bloody or rusty expectoration, or the respiration will be increased out of all proportion to the abdominal pain and tympany, or, as in Barnard's case, the temperature will rise too suddenly and too high for the supposed abdominal accident. These facts, if observed, will lead one to a careful examination of the chest, which will, in most instances, even early, reveal some loss of motion, friction, râle, dullness or bronchial breathing that discloses the existence of an intrathoracic inflammatory condition, and makes it clear that the abdominal pain is a reflected one. The abdomen in these cases is often pseudo-tender. A light touch hurts. Quiet, steady, deep palpation with the flat hand does not increase the pain. And, as Barnard observes, at the beginning of inspiration there is a yielding of the abdominal wall that is seldom seen in true peritonitis. With care, then, most of these cases can be recognized. I need not repeat what I said at the beginning, that this recognition is important. That truth is self-evident.

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[18] Guinon: Revue mensuelle des maladies de l'enfance, xix, p. 167.

[19] John Lovett Morse: Annals of Gynecology and Pediatry, Nov. 1899, p. 143.

[20] George E. Brewer: Some Errors in Diagnosing Conditions Resembling Appendicitis, Annals of Surgery, May, 1901.

[21] Richardson: Remarks on the Diagnosis Between Acute Appendicitis and Acute Intrathoracic Disease. Boston Medical and Surgical Journal, April 17, 1902, cxlvi, No. 16.

I may add that in this paper I have made no reference to other reflections of the pain of pleurisy and pneumonia, e. g., to the neck or to the lumbar region. Nor have I thought it wise to extend the scope of the paper so as to include such thoracic diseases as pericarditis, aneurisms, tumors, vertebral tuberculosis, etc. I have purposely limited myself to a consideration of the abdominal symptoms, chiefly pain, in acute pleurisy and pneumonia, believing that this is the form oftenest overlooked or misinterpreted.

DISCUSSION.

Dr. J. N. Hall, Denver—There are many points of confusion that I do not think Dr. Herrick has touched. I once saw the daughter of a member of our Association concerning whom two physicians and surgeons were in doubt regarding the presence of appendicitis or pneumonia. It proved to be the former. Confusion existed because there was abdominal distension, the liver was crowded up, and there was dulness below the ninth rib; with the compression of the lung there was no bronchial respiration, but crackling râles. In such a case it is extremely difficult to say what the condition is.

There is another point of confusion: With the displaced liver we may have friction which can not be attributed to lung or liver exclusively. In other words, it is difficult to determine whether we are dealing with peritonitis or pleurisy. In many cases the pain may be due to a diaphragmatic pleuritis. Again, you may have a leucocytosis, but this does not help in the diagnosis, because it may be due to pneumonia or to appendicitis. Last winter, in the wards of our county hospital, a man was admitted with a diagnosis of appendicitis; on account of the urgency of the case I was asked to see him at once. Everything seemed to be fairly characteristic of appendicitis, and I did not wish to say positively that he did not have appendicitis. I did not recommend operation, and the next day he developed a pneumonia in the left lower lobe and everything subsided in the abdomen. I do not attempt to explain how this happened unless there was a combination of lower left pneumonia and appendicitis.

Dr. Thomas McCrae, Baltimore—Dr. Herrick has pointed out some pitfalls into which all of us may stumble. I have seen three such cases all admitted to the Johns Hopkins Hospital surgical wards. In a recent one there were marked abdominal symptoms which rather suggested an attack of appendicitis, but the patient had had his appendix removed. The appendix being gone, cholecystitis was suggested. Examination showed a very tender abdomen, the pain increasing with respiratory movements. Examination of the thorax revealed slight dulness at the right base. The next day there was tubular breathing. It is easy to be misled in these cases. The sudden onset of abdominal pain with fever, leucocytosis, and, above all, the marked local signs, all suggest an abdominal condition. Inspection may show diminished respiratory movement on one side, there is tenderness, etc. I agree with Dr. Herrick that a knowledge of the possibilities is our greatest safeguard, and with that a thorough and careful routine examination. The surgeons sometimes suggest that we delay too long before calling them in; but perhaps if they called in the physician oftener they would be saved the mortification of opening the abdomen in pneumonia.

Dr. James M. Anders, Philadelphia—It has been long currently stated that the pain is usually located in the vicinity of the nipple of the side affected, but this is shown by statistics to occur only in 50 per cent. of the cases; the pain is often referred to the base of the chest on the side affected. I have seen a number of instances in which the pain was referred to the abdomen. In two instances the symptoms closely simulated those of a cholecystitis, especially the local manifestations at the beginning. Later the pneumonic features dominated the scene. As Dr. McCrae has stated, the clinical picture very often simulates these abdominal conditions. I can also recall a case in which the pain was referred to the gall-bladder region and in which the patient died, came to autopsy, and a complicating cholecystitis was actually revealed. The diagnosis had been a right-sided pneumonia. During that patient's life the pneumonic symptoms, as is usual, dominated the clinical picture. I can recall another case, seen recently, in which pain was referred directly to the appendicular region. There was considerable rigidity of the right rectus, the abdomen was somewhat swollen, but there was no distinct tumor mass. A diagnosis of appendicitis had been made by two physicians, and it was thought the case ought to be referred to a surgeon for operation. A careful physical exploration of the chest was made, following the golden rule, "in all cases in which there is fever combined with abdominal pain make a careful physical examination of the thorax." A lobar consolidation was revealed. The abdominal symptoms finally disappeared. I believe we may regard the abdominal symptom as an exceptional occurrence after all in pneumonia. In the experience of some the pain seems to be more commonly referred to the lumbar region. It is to be remembered that cases of pneumonia in which the pain is referred to the lumbar region may occur in patients who previously have had a nephrolithiasis. A man aged 62 had nephrolithiasis on two occasions, and more recently a right-sided pneumonia; the pain was referred to the right lumbo-abdominal region. He had marked rigors and a history of a cough, which led to a careful examination of the lungs and the discovery of a right-sided consolidation. The patient insisted that he was suffering from another attack of renal colic on account of the location of the pain. It is most important practically, as Dr. Herrick has suggested, to investigate the thorax before rendering a diagnosis in cases presenting such symptoms as abdominal pains and fever.

Dr. James B. Herrick, Chicago—The diaphragmatic pleura is frequently involved when we have this pain referred to the abdomen; yet it is not necessarily involved. The case that Dr. Hall refers to, where there was a left lower lobe pneumonia, the pain being referred to the right side of the abdomen, is certainly confusing and is not clear of explanation. It is possible there was a slight pleurisy on the right side which was overlooked. It possibly may be attributed to an anastomosis between the terminal filaments of the intercostal nerves of the two sides. Gerhardt and Huss found, in making dissection, an occasional anastomosis between the intercostal nerves of the two sides and explained the pain on the opposite side from this fact. It is possible that some such explanation might explain Dr. Hall's case. Tenderness on pressure is certainly a confusing feature. Yet, in some cases that I have seen the tenderness has not been exactly that which is found in peritoneal inflammation. If we make gentle steady pressure with the flat of the hand rather than with the finger tips we shall often find that the pain is superficial and not of the kind that is found in peritonitis.

This whole subject is an old one and has been referred to by many writers on pneumonia, but it is frequently overlooked. I did not intend to take a crack at the surgeons, but as Dr. McCrae has opened up this line of thought I may say that in talking on this topic of referred abdominal pain with a couple of surgeons one said he had never heard of such a thing and the other said he did not believe it ever occurred. It was largely because of this conversation that I thought a paper on the subject might be timely and perhaps instructive.

THE PASSING OF CHRONIC RHEUMATISM.*

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In response to the question, "Have you ever suffered from rheumatism?" addressed to the ordinary patient over 40 years of age, the physician seldom gets a negative answer. Even younger patients will tell of having had vague pains in their arms or shoulders, or in their knees or ankles, that they consider to have been rheumatic. Popularly, the notion is that rheumatism is one of the ills to which flesh is almost inevitably heir, and, in the course of time, practically every one is supposed to have some touches of it. It is not too much to say, then, that rheumatism is popularly considered to be practically a universal disease. Physicians encouraged this idea, to a certain extent at least, by suggesting that vague pains are rheumatic in origin, or at least agreeing with patients when they say that probably they have rheumatism.

As a matter of fact, many of the irregular practitioners in recent years, particularly the osteopaths, draw their clientele (and it is by no means innumerous), from the ranks of the so-called chronic rheumatics. Most of the proprietary medicines, besides their other wonder-working effects, are advertised to be good for chronic rheumatism, and especially for that fateful condition, the uric acid diathesis, which is supposed to be provocative of chronic aches and pains of many kinds.

To talk, then, of the passing of chronic rheumatism in the sense of the gradual disappearance of the affection during recent years, would seem to be highly paradoxical. Never, more than at the present time, did patients insist on treatment for the relief of pains and aches supposed to be due to chronic rheumatic conditions of one kind or another. That there are many symptom complexes to which the name rheumatism is commonly applied is beyond doubt. How many of these pathologic processes have anything in their underlying basis of causation to justify the name rheumatism is a very doubtful question.

Chronic rheumatism would supposedly be a condition in which some of the pathologic conditions of acute rheumatism persisted, and in which, as a consequence of this persistence, tissue changes of various kinds took place, causing a deterioration of joint structures. As a matter of fact, however, it will be found that while very many patients confess to chronic rheumatism, comparatively few will admit having suffered from the acutely painful red swollen joint, accompanied by fever causing confinement to bed, which characterizes true acute rheumatism. It is now generally conceded that acute articular rheumatism is a specific infectious disease, and while other specific infections, as, for instance, gonorrhea, influenza or typhoid fever, may produce disorganizing conditions in joints, it is a typical sign of acute rheumatic arthritis to go on to complete recovery. When changes in joints remain after acute rheumatism there is always some suspicion of the possibility of secondary infection, or even a doubt as to the original diagnosis, acute articular rheumatism having been the proper one.

A little examination of the cases commonly called chronic rheumatism shows how many disparate conditions are jumbled together under this term. Vague pains of any kind, for which no direct cause can easily be found, are at once called chronic rheumatism. Many of these conditions can be traced to definite nervous and mechanical conditions without much difficulty if careful examination of each individual case be made. I have already pointed out in previous papers that there are at least fourteen different achy conditions which are often called chronic rheumatism, but without any good reason. The most common form of pseudo-rheumatism is the relaxation of joints which occurs in the ankle and is known as flat-foot, or which follows the dislocations of joints producing tissue conditions which make the patients very sensitive for all their after-life to changes in the weather. Just as there are relaxations at the ankle joint, so there may be relaxations of other joints—the knee, the hip and the shoulder—which are apt to cause something of the muscular discomfort that becomes so prominent a symptom of flat-foot, or the use of dislocated joints in which relaxation has taken place.

A second very common form of vague pain usually attributed to rheumatism, occurs in connection with occupation neuroses. There is not a single occupation in which some movement involving the co-ordination of a number of muscles has to be made and frequently repeated, that may not be the source of pains and spasmodic inability to use muscles properly, such as occurs so commonly in connection with writer's cramp, or telegrapher's spasm. These movements need not necessarily be very complicated in order to have this discomfort develop. The lower limbs may be the subject of these occupation neuroses, as in the cases of men who work foot-power presses, or in those who run sewing machines, or even in nervous individuals who have to sweep much and constantly use the broom from one side supporting the weight on one leg, while the sweeping movement is accomplished with the arm. Filers, carpenters, laundresses who iron much, planers, men who have to use hammer and chisel, all suffer from these neurotic conditions, usually more painful on rainy days, and for this reason so commonly called rheumatism.

A third source of vague pains that may, if not carefully investigated, be attributed to rheumatism is neuritis. In persons who are exposed to the weather and who use one set of muscles much more than others, especially if at the same time there is the absorption into the system of such toxic substances as lead or alcohol, there not infrequently develops a neuritis of the nerve supplying the overworked group of muscles. Stonecutters, for instance, who use their deltoid and other shoulder girdle muscles for the purpose of frequently lifting a heavy hammer or mallet, and whose exposure to the elements leads them to take alcohol often in greater quantities than is good for them, develop a neuritis of that branch of the circumflex nerve which supplies these muscles. At first this makes the muscles much more easily tired than before. During this period other muscles in the neighborhood are asked to do more work than usual in order to make up for the paretic muscles. As a consequence, painful, overfatigued conditions develop. After a while, the neuritis continuing, there is almost complete loss of power in the deltoid, and then the man can no longer pursue his occupation.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank A. Jones and W. S. Thayer.

It must be remembered that the branch of the circumflex nerve which supplies the deltoid muscle at the shoulder also sends certain filaments to the joint structures of the shoulder. These filaments are really trophic fibers, and as a consequence the neuritis set up in them causes a lowering of the nutrition of the joint structures. This, together with the forced disuse owing to the inability to use and co-ordinate the muscles of the shoulder girdle, leads to something resembling degenerative changes within the joints. Points of tenderness develop especially over the head of the humerus, and the absence of synovial fluid may lead to crackling and roughness, so that there is some grating or fremitus when passive movements of the joints are made. It is easy to attribute such conditions to chronic rheumatism and to consider the neuritis in the case as rheumatic in origin and perhaps secondary to the joint changes, if the examiner does not follow out the history of the case carefully and examine what was the real beginning of the pathologic condition.

Some of these neuritic cases run a very insidious course, and it may not be clear for some time what the condition actually is. A very characteristic illustrative case of this kind has been recently under observation. The patient was a painter who did inside work, being occupied mainly with the painting of balustrades, doors, window-frames, and picture-moldings, requiring him frequently to occupy awkward positions and use many movements of the wrist in painting small carved portions of woodwork. He came complaining of vague pains in the forearm, and occasionally in the shoulder, which were worse on rainy days. He had been a painter for nearly ten years, and had never suffered from any symptoms of lead poisoning. There was no blue line on his gums. I concluded that it was a simple occupation neurosis, since the tired feelings that he described, and the tendency not to be able to work after a while, and the fact that the use of the brush in his left hand for a time had caused the development of the same condition, to a slight extent at least, in the other arm, were characteristic of such ailments.

One day he came to be treated for a sprained wrist. He had fallen on his right hand, and there was some effusion into the joints of the wrist. Two days later he appeared with a characteristic drop wrist. This had developed during the night, and his observation with regard to other painters rather led him to suspect what the true nature of the condition was. It is not unusual for drop wrist to develop after some injury to the part, just as it is quite a common story to have the first symptoms of toe drop as a result of alcoholic neuritis follow upon a sprain of the ankle. In both cases it is evident that for some time, probably for months, there has been a slow running, low grade and practically latent neuritis. It can easily be understood, however, how the preliminary manifestations of this would be a fatigue of muscles coming on much easier than before the nervous affection began, and a tendency to neurotic conditions such as occur in occupation neuroses because of the difficulty of co-ordinating complex muscle movements when the nerve paths leading to the group of muscles are disturbed by the presence of inflammatory products.

A certain number of cases of so-called chronic rheumatism here in America which present evidences of degeneration in joint structures following acute attacks of arthritis, are undoubtedly not genuinely rheumatic in origin, but are of gouty nature. Gout is much more frequent in this country than has been considered to be the case. Ordinarily gout is considered an English disease, and we look for English heredity in those in whom we suspect its presence. The absence of such heredity is, in many physicians' minds, an argument against an affection being gouty. Ordinarily, it would be considered, I suppose, not too much to say that gout is at least four or five times more frequent in England than it is in America. As a matter of fact, the comparison of the statistics of patients admitted to Johns Hopkins Hospital in Baltimore suffering from gout with those admitted to St. Bartholomew's Hospital in London for the same affection are in the proportion of only three to four. That is, gout is three-fourths as frequent in this country as it is in England. How difficult it is at times to differentiate acute gout from acute rheumatism may be judged from the confessions of excellent clinical observers, including Professor Osler himself, that only after two or three attacks of supposed acute rheumatism have occurred in a series of years in patients under their observation did they find the gouty nodules in the ears or the tophi in the fingers which proved that former attacks had been gout, and not rheumatism.

Gout is, in this country, earned rather than inherited. It occurs especially among those who are subject to the influence of lead and those who indulge too freely in malt liquors. While our beer is much less likely to cause the condition than the heavier malt liquors of England, there is now no doubt that the increased consumption of even light beer which has occurred in recent years in this country have made many more people liable to gouty attacks than before. As to lead poisoning, it must not be forgotten that besides painters and workers in lead factories, plumbers, typesetters, stereotypers and others engaged in the printing trades are likely to suffer from lead poisoning if they are susceptible to plumbum. The accumulation of lead in the tissues always predisposes to gout and leads eventually to changes in joints which may be described as chronic rheumatism if the real nature of the pathologic condition and its true etiology are not recognized by careful elicitation of the history of the case.

In recent years the condition known as rheumatic gout, or rheumatoid arthritis, or, better than any of these names, since it does not assume a knowledge of the etiology of the condition of which we have not yet described well, arthritis deformans, has occupied much more attention. We now know that this condition may occur in three forms. There is the slow running form, which begins usually as Heberden's nodes, and sometimes, though not always, goes on to involve other joints besides the terminal joints of the fingers, and so causes deforming, disabling deformity. The pathologic basis of this is a true productive osteitis of the ends of the bones near the joint surfaces, which seems to be due to the presence of irritants in the blood. It occurs by preference in nervous people. The acute attack of pain and discomfort in the affected joints, which are noted especially at the beginning of the affection, are likely to be more frequent and more annoying whenever the patient is under emotional stress or suffering from worry for any reason.

The second form of rheumatoid arthritis is usually called osteoarthritis and in contradistinction to the first it occurs more commonly in men than in women; it is seen by far most frequently in elderly male subjects. It consists of a true osteoarthritis usually confined to the hip joint and spoken of by orthopedists not infrequently as senile coxitis. It may occur also in the joints of the spinal column, producing a certain amount of soldering together of the vertebræ and consequent fixation of the back, which gives a very characteristic gait. Like the affection of a single large joint, this spondylitis deformans may be absolutely confined, as its name indicates, to the vertebral column, and is, in fact, usually so confined. This form of the arthritis deformans may occur in younger subjects than the coxitis deformans already referred to.

Neither of the two forms of rheumatoid arthritis described are likely to be taken for rheumatism by a carefully observant practitioner, though very few patients suffering with these affections come under treatment without being convinced that they are suffering from an affection of rheumatic origin. The third form of rheumatoid arthritis, however, has many symptoms in common with rheumatism, and is undoubtedly one of the main reasons why acute rheumatism is thought to produce chronic pathologic conditions in joints oftener than it really docs. This third form of arthritis deformans, called by English observers acute rheumatoid arthritis, is described very well by W. Hale White in the last number of Guy's Hospital Report, Vol, 57, 1902.

This third form of arthritis deformans occurs for the most part in women whose age is usually not far from 20. The disease begins, or is at any rate most prominent, in the proximal phalangeal joints, differing in this from the slow-running form of arthritis deformans which in elderly women begins in the distal phalangeal joints. Acute rheumatoid arthritis is usually strikingly seen in the wrists. It is markedly symmetrical, as a rule, in both hands. The swelling is considerable, and extends beyond the affected joints, so that there is a distinct fusiform swelling about the interphalangeal articulations and a general swelling about the wrist and other joints. Sometimes a creaking may be felt, due apparently to thickening of the synovial membranes. In the course of a very few weeks, as a rule, most of the joints in the body are affected, so that the patient becomes bedfast, and is unable to move fingers, thumbs or wrists, and sometimes not the elbows, shoulders nor even any of the joints of the lower extremities. The joints of the spine are often affected, so that turning in bed is difficult and painful, and the temporomaxillary joint is frequently implicated, so that mastication becomes a matter of great discomfort.

Muscular wasting is so very rapid that it is clearly an extreme degree of genuine arthritic atrophy not dependent on disuse. The wasting is usually seen best in the hand and forearm, but in a bad case all the muscles may become distinctly atrophic. The most interesting thing about the disease is the temperature. There is a daily rise toward evening up to 101 F. or 102 F. Exposed parts of the patient are likely to be covered with sweat, and, as can be readily understood, there is strong simulation of acute articular rheumatism. The points of differentiation from articular rheumatism are quite clear, however. The disease begins in the fingers, gradually affects all the other joints, seldom fails to involve the temporomaxillary joint, and very commonly affects the joints of the spine, which are seldom attacked by true acute rheumatism. The disease runs a definite course, the temperature coming to the normal after three to four weeks. Much immobility and some swelling around the joints remain. Most patients have a distinct tendency to relapses during which the joints are once more swollen and tender as before. After the febrile stage is passed swelling of the synovial membranes and the soft tissues around the joints remains and the muscular atrophy causes disability. This condition may not improve much, and the patient may remain a chronic invalid.

It is easy to understand how cases of this kind, which have been described by such excellent observers as Garrod and Bannatyne, as well as Hale White in England, would give the impression of an acute rheumatism running over into chronic rheumatism. This form of arthritis deformans is, however, a disease by itself, usually following some infectious fever, as influenza, parotitis, tonsillitis or the like, and perhaps itself of specific microbic origin.

It is easy to understand, from all that has been said, what little space is left for so-called chronic rheumatism. There would seem to be a few cases of true acute rheumatic arthritis, or of the subacute variety which produce changes in the joint tissues that are persistent and progressive. There is a growing impression that even of these few cases the majority are due not to rheumatism alone, but a mixed infection, the secondary infection being responsible for the persistent pathologic lesions. Certainly cases of true chronic rheumatism, that is of progressive pathologic changes in joint tissues for which no other cause except rheumatism can be found, are very rare. So much so, very probably, as to constitute them a medical curiosity. Personally, I should like very much to see such a case, for I am free to confess that I have not as yet seen one.

Is it possible, then, that chronic rheumatism is to be discussed without even a mention of the uric acid diathesis. Personally, I see no reason for hauling in a diathesis for which we have no substantial proof. Certainly the vague pains that are usually attributed to the uric acid diathesis or to lithemia are, in my experience, due more to a neurotic constitution as a predisposing factor and overwork of particular groups of muscles usually under unfavorable conditions as a direct etiologic agent, than to any other cause.

This, of course, does not deny the existence of any of these achy, painful conditions, which are so common and so frequently demanding treatment. It does not deny that during damp weather, and in people who work or live in damp locations, there will be a distinct tendency to chronic aches and pains, just as there would be to frequent toothache under the same circumstances. It only transfers these affections from the column of chronic rheumatism, where they are all jumbled together, to the manifest opprobrium of our therapeutics, to separate columns, with regard to some of which we know our therapeutic impotency, but with regard to most of which we are fully aware that massage, rest, local treatment and improvement of the constitutional condition will do much to get rid of the symptoms. If the general public and the majority of the medical profession were once persuaded that chronic rheumatism, instead of being a common ailment, is, indeed, very rare, then there would be less failures of diagnosis, with consequent inevitable failures in treatment and less resort to our osteopathic friends, the enemy, and to the many remedies that are supposed to alter the uric acid diathesis and get rid of chronic rheumatic tendencies.

DISCUSSION.

Dr. James Tyson, Philadelphia—Dr. Walsh has essayed a difficult subject, difficult as are all subjects characterized by an unknown or at least inexact pathology. *There is confusion* between gout *and chronic* or subacute rheumatism. While I think it is true that gout is a more frequent occurrence in America than has been supposed, I do feel sure that a great many cases are called gout without sufficient reason. I do not think a diagnosis of gout is justified unless there is or has been podagra, or uratic deposits in the joints or evident hereditary tendency. Heberden's nodosities, regarded as gouty by so many, may be gouty, but more frequently perhaps are a product of rheumatoid arthritis. I wish to urge on my fellow practitioners of medicine an attempt at more precise diagnosis of the two conditions. I am sure that in certain cases in my own experience many years have been required to determine whether a case be one of gout or rheumatism.

I should like to say a word also on the threadbare but still undetermined subject of the uric acid diathesis. I sympathize with Dr. Walsh in this respect, and it is mortifying to note how often rheumatic pains are ascribed to the uric acid diathesis without any reason whatever. It is often a careless expression, and not always intended by those who use it, but it gives an impression to the laity which is erroneous. As Dr. Walsh says, we really do not know what the uric acid diathesis is. There is, however, a clinical complex consisting in a scanty secretion of urine, of high specific gravity, with constant and copious deposits of uric acid and urates which is associated with the uric acid diathesis and is evidence of its presence. But it must be a permanent condition. It has doubtless happened to many of us to note in the morning after a liberal dinner including wines a scanty urine with uric acid deposits, etc., which will wear away after liberal ingestion of water, but this temporary state is not the uric acid diathesis. In the conditions referred to even the ingestion of large quantities of water does not increase the amount of urine secreted, and the tendency to sediments continues. To this condition I think we are justified in applying the name "uric acid diathesis." Such cases are not very numerous, and it may happen that associated muscular and joint pains are the result of it, but one ought at least to be sure of the combination before one asserts the causal relation.

Dr. Thomas McCrae, Baltimore—Dr. Walsh has faced a question that the majority of us have faced frequently, and often with the diagnosis of "chronic rheumatism." The profession is largely to blame for the ideas the public have regarding this condition; we inherited the idea and pass it on. Dr. Walsh brought out a good point when he said that if one made a diagnosis of acute articular rheumatism and, after the attack is over, joint changes persist, then consider a wrong diagnosis; if we did that we would find fewer mistakes.

Dr. Alexander Lambert, New York—This helter-skelter diagnosis of rheumatism has been made for a long time, and my confrères in New York should take a more self-respecting attitude toward these painful affections. Often the diagnosis is easily made. It has for a long time struck me that so-called cases of chronic rheumatism with active tissue changes, ulnar deformities, etc., have nothing to do with rheumatism. It is perfectly true, in my opinion, that many cases began like articular rheumatism which can not be differentiated from it, which later prove to be true cases of arthritis deformans. In my experience this is seen most commonly in young women.

Gout is much more common in New York of late years, and it is certainly more often met with in hospital work than formerly. A great many cases that at first seem to be cases of rheumatism and yet which are treated as gout get well, and this is especially so in women where you get so often this irregular type of gout. That type of real chronic rheumatism is, as Dr. Walsh has stated, one that we must disregard. There are cases of rheumatism which begin as acute articular rheumatism, and before the patient recovers from one attack entirely they may have another acute attack and then run on into a subacute condition that one must look on as chronic, a chronic articular rheumatism. This process runs along a long while and leaves the patients more or less crippled. A great number of mistakes come from calling real gout rheumatism, and the ideas that are so prevalent regarding the uric acid diathesis have much to do with it. I am only too glad to be able to add my protest against this asylum for lazy diagnoses. I think it is firmly believed that the uric acid diathesis, occurring in healthy, vigorous, athletic, strong young men, is the cause of nearly all the woes they are heir to, especially the muscular pains. Whatever causes gout causes uric acid, and uric acid is simply one of the many symptoms. These men were usually 20 years old, and no one would accuse them of being gouty or rheumatic; they were in their prime and in vigorous health, and yet, among such, uric acid deposits in the urine are frequently found.

I wish to thank Dr. Walsh for bringing this subject up, because it is only by such papers and by such discussions can we realize that the so-called cases of gonorrheal rheumatism, scarlatinal rheumatism, etc., are not cases of rheumatism at all, but distinct and definite diseases; all cases having pains in the joints should not be always considered as rheumatic, but they should be clearly differentiated. It is only by so doing that we will be able to be honest with ourselves and arrive at an accurate and scientific knowledge of the subject.

Dr. James J. Walsh, New York—When I called my paper "The Passing of Chronic Rheumatism" I did not mean absolutely no cases of chronic rheumatism existed; I did mean to say that cases of chronic rheumatism were more or less curiosities and well worth studying. Chronic rheumatism is generally thought to be very common. If one should run across a case of true chronic rheumatism we would want a report of it in our journals. What is acute rheumatism? We think it is an acute infectious disease. A number of clinicians think the disease runs a course of from two to six weeks and gets better; they give salicylates, not because it is a specific for rheumatism, but because it lessens the pain and lowers the temperature. Again we have certain joint lesions occurring in gonorrhea, scarlet fever, typhoid fever and intestinal troubles that are accompanied by diarrheas, dysentery, etc., all of which may be accompanied by joint lesions and to which the term "rheumatism" is applied. I wish to enter a plea for a better knowledge of this condition.

It gives me pleasure to hear what Dr. Tyson has said regarding the uric acid diathesis; I think the uric acid diathesis has been overdone when we say that it gives rise to so many aches and pains, etc. If one looks into the literature one will find little authority for thinking the uric acid diathesis a prominent factor in disturbances of metabolism. We must remember that nervous people are more subject to pain than others; they may simply have some discomfort and think they really have pain, and such is particularly worse on rainy days. Dampness is associated with it.

DANGERS ATTENDANT ON ATTEMPTS AT GAINING THE INTERVAL IN OPERATIONS FOR APPENDICITIS.*

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It is strange that medical men in general and anatomists and physiologists in particular claim that the appendix vermiformis has no function, that it is a useless appendage, playing the part of catching any old thing, or furnishing the surgeon opportunity to rake in ill-gotten gain. Ridiculous as it is to compare inanimate things to parts of the human body, it may be well to do so here, in order to state that at such a right-angled junction as is formed by the ileocecal connection, an oil cup would be furnished in mechanics, while in hydraulics, as in a sewerage system, for instance, a manhole would be placed. This appendage apparently has secretory functions by which, it is fair to assume, the natural tendency to pastiness of the residue of digestion, after it comes to the cecum, is so modified that it is rendered less adhesive; the cecum being the receptacle for the effete fecal mass needs, it would appear, lubricating material, and this assumption indicates the necessity therefor, in order that the fecal current and the propulsion of the mass may not become interrupted. Whether this assumption is based on incorrect reasoning, the physiologic chemist ought to be able to demonstrate.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. A. J. Ochsner, J. E. Moore and De Forest Willard.

A normally situated appendix free from disease means to its possessor, other things being equally normal, that he shall be freer than others from the one great danger attendant on life from the cradle to the grave—constipation. Understand that no inference is to be deduced from this statement that constipation is the cause of appendicitis; on the contrary, appendicitis or appendiceal irritation, from which one may suffer a great part of his lifetime before sufficiently extensive involvement takes place to make up the condition known as the "attack," is always productive of constipation; mark the distinction as well as the difference. Constipation seldom, if ever, produces appendicitis. Diarrhea may occasionally do so; these conditions usually are but symptoms of the disease; that they are relieved by non-surgical means is not evidence that they were the cause of, nor that it is cured by such relief.

This brings us to the consideration of the many ailments referred to the gastrointestinal tract during infancy and childhood which are often misinterpreted as "gastric difficulties," "cholera infantum," "cholera morbus," "colic," "gastrointestinal," "intestinal" and "nervous dyspepsia," "liver ailments," "constipation," or even "diarrhea"—for a diseased appendix quite as often causes diarrhea as constipation, and sometimes we note these conditions alternating in given cases. Such "ailments," "difficulties" and "disturbances" are nearly if not always, due to a diseased appendix, the disease condition, located in its mucous membrane, having been produced by some infection, the result of impure food-product, or by the exanthemata, influenza; or, catarrhal inflammation due to cold is as likely to affect the mucous membrane of the appendix as mucous membranes elsewhere, even to the extent of slight superficial ulceration thereof, each attack passing through the various stages on to the process of cicatrization, the appendix itself not showing any marked pathologic change at the time of these repeated ulcerative attacks. Eventually the stenosed or strictured conditions following the inflammatory changes show up as cicatricial contractions and these form more or less perfectly retentive diaphragms which interfere accordingly with the complete emptying of the appendix of its secretions, or its attempts at ridding itself of foreign particles that may be accidentally forced into its lumen; an appendix thus crippled during infancy or childhood, while a menace to perfect health and likewise to life, may not until years after the initial disturbance cause highly dangerous or fatal effects. During these years the symptoms may be of the character known as "digestive disturbances," and the patient may have taken numerous forms of quack nostrums.

In making our diagnoses for appendicitis we should have to contend with but three forms of the disease: the pre-inflammatory, the inflammatory, and the post-inflammatory. Further division and subdivision serve but to confuse and bring about an obscure or doubtful diagnosis which in turn serves to bring about delay until the opportune moment is passed. In our examinations let us not look for symptoms alone at the great risk of misinterpreting them; rather let us look for signs, one sign in particular, that of tenderness.

This sign was pointed out to us years ago by Dr. Charles McBurney of New York City, and it is almost infallible in determining the condition of advancing inflammation of the appendix. As you know, its presence is made manifest by pressure being applied at the point that is known to be the normal site of the base of the appendix when it is involved by lymphangitis. McBurney described it as a point of exquisite tenderness, and his friend, Dr. Lewis A. Stimson, also of New York, named it "McBurney's point." A number of years ago I evolved a process of reasoning from my then somewhat limited knowledge of this subject and accordingly wrote an article which was published in the *New York Medical Journal*, April 18, 1891, page 452. At that time I entertained ideas that somewhat deprecated the value of this sign. Greater experience, however, has taught me to regard it most highly. I felt somewhat diffident of having published this article until about a year ago, when I read the statements regarding this point from the pen of the distinguished surgeon, Sir Frederick Treves. In his article he attempts, without success, to belittle the McBurney point as a sign of appendicitis by stating that he found that the location of the appendix in his postmortem work did not correspond with the "point" as noted in the living subject.

The refinement of the diagnostic sign of McBurney, palpation of the appendix, as given to us by Dr. Geo. M. Edebohls of New York, is the open sesame to the dismal cavern of appendicitis, for by this key, that of palpation of the appendix itself, we can trace its entire outline, and also detect the tenderness caused by disease situated within its walls and this during the pre-inflammatory stage. Hence its exceeding great importance, for on recognition of the relative value of these tests of McBurney and Edebohls and their application and prompt action as a result of the knowledge gained thereby, will depend the relative danger of early as compared with late operation.

The symptoms of acute appendicitis are of so definite a character that "he who runs may read" and the physician listening to the history of one suffering from an "attack" ought to be able to make a diagnosis by telephone and that even at long distance. Had one in his enthusiasm during the discussion of this subject at our last meeting made an appeal for a certain great leader of fashion, then the uncrowned King, to set a pace for the world to follow by having his diseased appendix removed, such disease condition having been interpreted from the daily press reports of his "stomach troubles," "intestinal difficulties," "influenza," and last, but by no means least, "lumbago attacks," how such a one would have been laughed at; and yet any experienced American physician or surgeon would have been warranted in interpreting these reports of the case, even at that time as meaning nothing else but appendicitis, thus making a diagnosis even by cable. The primary danger in connection with appendicitis is that the pre-inflammatory stage of the disease is not detected; this being due to the old time nonsensical ideas, among which that of a tumor of perityphlitic origin is uppermost, having been too strongly entrenched in the minds of many medical men. What a multitude of woes, miseries and sufferings could be swept away were we but to recognize in the infant or child its mildly diseased appendix, which in time, if left to the uncertainty of medical treatment, plus dietary juggling, must come to the inevitable state of diffuse inflammation, when still greater danger becomes attached to the situation, and this even though we operate at the very earliest hour of this stage of "attack." If we operate late in the attack, let us not forget that the operation may be followed by hernia, "to plague the patient and vex the surgeon," as Joseph D. Bryant has so aptly said.

The greatest danger of all, however, in connection with the diseased appendix is that of the "wait and watch" method of treatment, consisting of no matter what kind one may suggest, from the most heroic to that of the complete "let alone plan," instead of surgical intervention, until hour after hour has flitted away in the vain and forlorn hope that lost opportunity may return, until we find ourselves facing a problem, the outcome of which is most dubious regardless how well calculated may be its attempted solution. No amount of medical treatment or dietary adjustment can ever make amends for the delay that leads us into such a predicament. Every hour so lost regardless of what one's fancy may choose for him *in his attempt at regaining this lost opportunity*, the more surely adds its own danger, until danger after danger beset the path chosen so recklessly, as he casts aside the opportune moment for surgical treatment of which, if he take advantage, he will be saved embarrassment, to say the least. Another and very grave danger attendant on attempt at gaining what may seem to be the golden opportunity for surgical interference, or operation during "interim," is that the patient finding that he has recovered from his "attack" believes, and is encouraged by his medical attendant in thus believing, that he may have been "cured," so he flatly refuses to have an operation at this time, favorable and all, though it may seem to him. A number of such cases must have come under the observation of every medical man of considerable experience with patients afflicted with the disease. I have had quite a number; many of them are still miserable; some have died from other attacks, no operation having been performed, while a few have not been re-attacked; their time is yet to come. So that, after all due consideration has been given to the dangers attendant on attempt at gaining the "interim" in the operation for appendicitis, it would seem apropos to here cry "physics to the dogs," and that *immediate* surgical intervention should be the shibboleth of every physician and surgeon! To play on the immortal bard's great creation, the Soliloquy of Hamlet, why should not the sufferer from a diseased appendix say: "Doctor, why not rather *bare* the ills I now have than wait for others that you know not of?"

Treves says what is so well known even here in America, that there will die but about five per cent. of those first attacked by appendicitis! What man among us would be satisfied with a loss by death of five, two, one, or even a still smaller percentage? He also makes the statement that out of one thousand operations for appendicitis, during "interim," he has had but two deaths; so far, so good. The mortality need not be as great as one-hundredth of 1 per cent. if immediate operative measures be resorted to, on recognition of the disease during the pre-inflammatory stage. Why should Treves have had a death at all under such favorable conditions as surrounded his thousand cases? But has he told us how many people died during the process of treatment under which they must have gone, and that at the hands of many doctors, most likely, in order that each one of this apparently great number should get to the goal of his, Treves', ambition—the day of "interim"? If there were not accompanying deaths attendant on this doctoring, great was the feat, and we should know of what it consisted. Will any one here, even our friends Ochsner and Mayo, make any such heroic attempts as trying to get together one thousand cases for interval operation in appendicitis, without death attending at least 2 or 3 or even 5 per cent. of the number, and this even during the "first attack"? Ochsner should make himself more clearly understood here in New Orleans than he appears to have done elsewhere. A short time ago I listened to a report of the meeting held in Saratoga. The reporter took great umbrage when, in discussing his so-called "impressions" of the meeting, I made the statement that Ochsner did not pretend to more than attempt to get his patients in better condition for operation, which he performed as soon as it became satisfactory to him. The gentleman and others, his friends, took issue with me, all claiming that Ochsner "cured," note the word "cured," those cases by treatment, operations not being resorted to but occasionally; *in fact, they stated that all of the successful cases reported in his discussion of Deaver's, La Place's* and Parker Syms' papers at the Section's last meeting were not operated on at all, but were "cured" by his (?), Ochsner's, method of treatment.

In conclusion permit me to say, Mr. Chairman, that here in the South, and elsewhere, New York, Boston and vicinities, physicians in general are progressive and quite up to date in the management of appendicitis, while it is sad to note that in Pennsylvania, even though it be my own state, physicians, not always of the highest standing, however, point the finger of scorn and rail at passing brothers who stick to the surgical maxim, "Operate, and operate early!" So when Deaver says he has different cases from those seen in Chicago it is the truth, for perhaps in no other place on earth can the sodden, painful, phlegmonous mass typified so graphically in Joseph Price's "Green Groin" be as plentifully seen as in the City of Brotherly Love, and this in spite of Deaver's teaching, the following of which would but revert directly to the contrary of all of this.

DISCUSSION.

Dr. H. D. Niles, Salt Lake City—So long as the large mortality from appendicitis comes from waiting for an opportune time to operate, so long as the small mortality comes from operating when we have the infection within the abdomen, so soon as the diagnosis is made, just so long, it seems to me, that we should operate immediately when we make the diagnosis. If we wait, we are waiting for the development of conditions that no man will now claim he can recognize. I do not mean by that that you can not tell the pulse or the temperature, or that you can not mention other symptoms, but no one can tell how dangerous it may be not to operate or how dangerous it may be to operate. No matter how small within the peritoneal wall, there may be that spurious and dangerous infection from the peritoneal cavity. With these uncertainties and with the expectation of occasionally choosing the wrong time, to me it seems best to operate when I know I have the infection, because I am not certain how long I can safely leave it.

Dr. James B. Bullitt, Louisville—One word in regard to the conception of the author's paper. My impression was that the question was whether or not Dr. Ochsner cures his cases with operation or without operation, and. therefore, I yield the floor to Dr. Ochsner.

Dr. A. J. Ochsner, Chicago—Evidently I have had the misfortune of being misunderstood. Since the Saratoga meeting of this Association I have stated my ideas on this particular point with the greatest possible care in the form of conclusions, which have appeared in the *Medical News* so that anyone who may be interested will have an opportunity in the future to see exactly what my position is regarding this subject. The same thing has been done in a number of publications, but I have in this one considered every point that has come out in any and all of these discussions. These conclusions were formulated as follows:

1. The mortality in appendicitis results from the extension of infection from the appendix to the peritoneum or from metastatic infection from the same source.

2. This extension can be prevented by removing the appendix while the infectious material is still confined to this organ.

3. The distribution or extension of the infection is accomplished by the peristaltic action of the small intestines.

4. It is also accomplished by operation after the infectious material has extended beyond the appendix and before it has become circumscribed.

5. Peristalsis of the small intestine can be inhibited by prohibiting the use of every form of nourishment and cathartics by mouth and by employing gastric lavage in order to remove any substances of food or mucus from the stomach.

6. The patient can safely be nourished during the necessary period of time by means of nutrient enemata. Large enemata should never be given, for they may cause the rupture of an abscess into the peritoneal cavity.

7. In case neither food nor cathartics are given from the beginning of the attack of acute appendicitis and gastric lavage is employed, the mortality is reduced to an extremely low percentage.

8. In cases which have received some form of food and cathartics during the early portion of the attack and are consequently suffering from a beginning diffuse peritonitis when they come under treatment, the mortality will still be less than 4 per cent., if peristalsis is inhibited by the use of gastric lavage and the absolute prohibition of all forms of nourishment and cathartics by mouth.

9. In this manner very dangerous cases of acute appendicitis may be changed into relatively harmless cases of chronic appendicitis.

10. In my personal experience no case of acute appendicitis has died in which absolutely no food of any kind and no cathartics were given by mouth from the beginning of the attack.

11. The mortality following operations for chronic appendicitis is exceedingly low.

12. Were peristalsis inhibited in every case of acute appendicitis by the methods described above, absolute prohibition of food and cathartics by mouth and use of gastric lavage, appendectomy during any portion of the attack could be accomplished with much greater ease to the operator and correspondingly greater safety to the patient.

I would make the following suggestions for the treatment of appendicitis with a view of reducing the mortality:

1. Patients suffering from chronic recurrent appendicitis should be operated on during the interval.

2. Patients suffering from acute appendicitis should be operated on as soon as the diagnosis is made, provided they come under treatment while the infectious material is still confined to the appendix, if a competent surgeon is available.

3. Aside from insuring a low mortality this will prevent all serious complications.

4. In all cases of acute appendicitis without regard to the treatment contemplated the administration of food and cathartics by mouth should be absolutely prohibited and large enemata should never be given.

5. In case of nausea or vomiting or gaseous distention of the abdomen, gastric lavage should be employed.

6. In cases coming under treatment after the infection has extended beyond the tissues of the appendix, especially in the presence of beginning diffuse peritonitis, conclusions four and five should always be employed until the patient's condition makes operative interference safe.

7. In case no operation is performed neither nourishment nor cathartics should be given by mouth until the patient has been free from pain and otherwise normal for at least four days.

8. During the beginning of this treatment not even water should be given by mouth, the thirst being quenched by rinsing the mouth with cold water and by the use of small enemata. Later small sips of very hot water frequently repeated may be given and still later small sips of cold water. There is danger in giving water too freely, and there is great danger in the use of large enemata.

9. All practitioners of medicine and surgery, as well as the general public, should be impressed with the importance of prohibiting the use of cathartics and food by mouth, as well as the use of large enemata, in cases suffering from acute appendicitis.

10. It should be constantly borne in mind that even the slightest amount of liquid food of any kind given by mouth may give rise to dangerous peristalsis.

11. The most convenient form of rectal feeding consists in the use of one ounce of one of the various concentrated liquid predigested foods in the market, dissolved in three ounces of warm normal salt solution introduced slowly through a soft catheter, inserted into the rectum a distance of two to three inches.

12. This form of treatment can not supplant the operative treatment of acute appendicitis, but it can and should be used to reduce the mortality by changing the class of cases in which the mortality is greatest into another class in which the mortality is very small after operation.

In regard to the first point, I wish to say here, as I have said everywhere before, so long as the infection is within the appendix when I make the diagnosis, I operate immediately if I can obtain the consent of the patient. I have stated the reasons why this should be done over and over again.

There is, however, a time that has been described by Dr. Niles, a time which comes to every surgeon, when we can not say with any degree of certainty that the particular patient under consideration will get well if we operate at once. This class of patients, under the best possible conditions, and with the best possible surgeons, will produce a mortality of from 15 to 30 per cent. if they are operated on at once as soon as the diagnosis has been made. I wish to say that with those cases we do not know what will happen if we operate at once. We do know, however, that in 97 per cent. of all such cases suffering from perforative or gangrenous appendicitis the patient will get well, provided we follow out the plan outlined in the above conclusions, namely, that of washing out the stomach, and giving absolutely no cathartics and no food of any kind by mouth and giving no large enemata until the patient has been normal for at least four days. We have counted the leucocytes and have found in all cases in which this treatment was carried out that the abnormal leucocytosis has decreased. We have found that the pain and the tympanitis disappeared regularly and that the patient's condition has improved systematically, and that although there is still a slight mortality, this has been diminished enormously by this form of treatment, not only in my own hands, but also in the hands of a large number of physicians and surgeons who have carefully carried out all of the details of this plan of treatment. Those who have failed have either permitted the use of a little food by mouth or they have neglected to employ gastric lavage or they have given large enemata.

Dr. Miles F. Porter, Fort Wayne, Ind.—We have operated in the beginning of the attack on several hundred cases and we have not lost a single case. We have counted these cases just as they come into the hospital; not only the cases in an operable condition, but those which died right after they entered the hospital. Some cases should be operated on after they recover from that attack, at a safe period of time. Occasionally we have a death, but we have only had 2 deaths this year out of 130 cases. Neither of these cases should have died, but the one died from pneumonia and the other from shock.

Dr. William J. Mayo, Rochester, Minn.—I think we are all agreed on one point—the point on which Drs. Murphy, Deaver and Ochsner, and so far as I know almost every prominent surgeon in this country has insisted—that if you can get the case within the first forty-eight hours that case should be operated on, and the sooner you operate the safer the operation will be. The more experience I have the more convinced I am that this is the proper course to pursue. Now, if you have a case that comes to you in which you believe that the inflammation is still confined within the appendix and the patient is still in a reasonably good condition, I do not care whether it is during the first forty-eight hours, or whether it is during the third, fourth or fifth day, I will operate on that case, because I believe that that case is going to get well. We have, at least out in Minnesota, a considerable number of cases brought to the hospital in which this favorable condition has gone by. The patient is tympanitic, vomiting, with quickened pulse, and we realize that no longer by removing the appendix can you get the material out of the system, and if you operate on this case at this time there will be a very considerable mortality. If you take these cases that show this septic condition (and Dr. Lund has shown us how to take care of some of the worst of them) and put them on the plan of treatment recommended by Dr. Oschner, in a few days the majority will get into a condition in which they can safely be operated on with a mortality of 4 per cent. or less; at least this has been our experience.

Dr. J. B. Murphy, Chicago—I feel that I have for the past two years understood Dr. Ochsner's position as he has stated it here to-day. I feel that the majority of practitioners have not properly interpreted his position, and that Dr. Ochsner has been greatly wronged and injured and maligned by many practitioners. I am delighted to find that we are practically a unit as to what should be done in cases of appendicitis. I do not see wherein we differ at all. There are cases, however, which we can not rescue by operation at the time they are brought into the hospital, which we can reach by operation at a later time. These cases are so small in number, however, in comparison with the whole, and the number will become smaller every day so soon as we understand that the profession is a unit, including Dr. Ochsner, that the cases are all better operated on within the first twenty-four or forty-eight hours, and that we ought to make a diagnosis before that time, and a practitioner will be ashamed to come in with a case after that time has elapsed. He can no longer say, "I have given this patient the 'Ochsner treatment,'" when the patient is presented in a moribund condition.

Dr. R. H. Gibbons, Scranton, Pa.—A bright, pretty girl, 16 years of age, a miner's daughter, was "attacked" during the evening of a Thursday of June last. A physician was called and prescribed for her, stating that she had a "bilious attack." On the following Tuesday I visited her in consultation, finding her abdomen enormously distended. It was recommended that she be taken into hospital that attempt might be made to get her in a more favorable condition for operation. I explained to her family the danger attendant on shifting her over, the rough roads in one of the crude ambulances with which we are usually furnished throughout the coal regions, so she was not changed. I tried to have her physician appreciate the importance of keeping from her all forms of drugs, and even food or fluids, and to nourish her, if necessary, per rectum. This was an unsuccessful undertaking. At the end of two weeks, when I was again called, I found her condition was worse, if possible, than on the former occasion. I persuaded her family to have her removed at all hazard to a private hospital several miles distant; this was successfully accomplished. A rigid nursing surveillance was established, nothing was given by mouth, rectal alimentation was instituted. As is often noted to be so, when such patients are treated in this way the distension subsided, the peri-inflammatory exudate largely disappeared and the case assumed an altogether more favorable outlook, of which, when at its height, I proposed taking advantage, intending to operate. The already referred to danger attendant on attempt at gaining the interval opportunity now asserted itself. It was in this way: If the patient has done so well thus far why should she not make an entire recovery; in other words, why operate? These were questions that were put, not only by the little girl herself, but by various members of her family and others interested. While she was in this fairly favorable condition Dr. Robert F. Weir of New York City, while here in Scranton in consultation in another important surgical case, saw her with me, and said, as he had said at the meeting of a year ago, "that it was dangerous to postpone operation in any case." I regret exceedingly that I did not insist on operation at this time, for soon thereafter she was taken with symptoms which manifested themselves as those of pyophlebitis, and nothing whatever had the slightest effect on her condition, she finally dying on the forty-first day of her "attack." Dr. John A. Wyeth, who was in town spending a number of days in expectation of possible operation in a critical case of typhoid, also examined this case, but at a time when she was within a few days of her demise, when every organ in her body appeared to be under the influence of the general toxemia.

Special Article.

THE FOURTH OF JULY, 1903, CASUALTY LIST.

A. THE TETANUS MORTALITY.

Before the Fourth of July celebration began, accompanying the desultory explosions that precede it by several weeks, the daily papers throughout the entire country north of Dixie were full of warnings of what was to be expected. The experience of previous years was retold; how many lives had been lost through the accidents of the Fourth, and how many more had succumbed to the tetanus epidemic that follows in its train. There were countless warnings to parents, both of the dangers in the use of toy pistols and the necessity of proper care of the wounds they might produce. Much advice was given in this last respect that was for the most part good. The responsibility of municipal authorities was pointed out. Attention was called to innumerable ordinances controlling the sale of toy pistols to minors and the discharging of firearms in the limits of the municipality. Assertions were made that if existing laws were properly enforced by the police the events of preceding years could be much modified, if not eliminated.

But all to what avail? Already in Pennsylvania a foretaste of the coming calamity had been furnished by a preliminary outbreak of tetanus following a blank cartridge demonstration on Decoration Day. According to the newspaper accounts, more than a score of deaths had resulted from this cause alone, and the papers of Pennsylvania urged vigorous action on the authorities, and warned the people of the dangers the Fourth would bring. And yet Pennsylvania had the worst epidemic of tetanus after the Fourth of any state in the Union. The part played by the lay press in this particular feature of preventive medicine has been noteworthy, and entitled to the highest commendation. That it seems to have been fruitless is none the less credit, for we can not tell what the result might have been otherwise, and we know of much good that has been done through this warning of the press.

Now that the Fourth has passed, we are counting up its cost. With as general warning as could be given, the tetanus epidemic has come with even worse and more widespread violence than usual. Over four hundred families are mourning the agonizing death of some member, while a few, a very few, anemic, emaciated survivors are convalescing from one of the most terrible experiences that disease can bring. The impossibility of educating the public, and more particularly its officers, to a state of action is too evident. There is no difficulty in educating the public to a point of horror and indignation that such things should be—but the steps necessary to terminate the wrong are not forthcoming.

Nor has the public alone been warned in vain. Hardly a medical journal in the country failed to speak of the same topic at the approach of the Fourth, and to urge the necessity of thorough surgical treatment of blank cartridge wounds, as well as the desirability of prophylactic use of antitoxin. Yet we now hear the same story of the boy who was taken to the family physician or the dispensary soon after being injured. "The doctor dressed the wound," or "tried to pick out the wad," or "washed it with antiseptics," or "thought it but a trivial injury, and said that it would be all right in a few days." And then comes the sequel that "after lockjaw had set in the wound was opened and it was found that pieces of the wad had remained at the bottom of the wound. These were removed, the wound was cauterized, and antitoxin was given. The boy died in great agony the next morning."

There has been an impression that this year's epidemic has been more severe than usual. However, there has been nothing reliable with which to make comparisons, and the impression has been gained chiefly through newspaper reports. Some of the daily papers, notably the *Chicago Tribune,* have made praiseworthy efforts to keep track of the number of deaths reported to them by the press bureaus and otherwise, but such information is obviously incomplete. There also exist various impressions as to the modes of infection with the tetanus bacilli, the sources of the organism and the nature of the wounds that most frequently introduce them. In order to place this subject on a basis permitting its study from the standpoint of preventive medicine The Journal has attempted to collect all the information possible concerning this year's outbreak. The total number of cases collected far exceeds the number collected by the various daily papers, because we have been able to secure reports from many small communities that never were put on the press wires. Obviously it has been impossible to verify all the reports we have received, and in order that any errors of omission or commission may be corrected we herewith publish a full list of the names of the victims, arranged according to states. Any additions or corrections that may be made by our readers, which may enable revision of these statistics and render them more valuable for future comparison, will be appreciated. While it is possible that in this list there are a few duplications, and a few cases reported as tetanus that were sepsis, or something else, on the other hand, there were undoubtedly many more cases that were not reported, and many cases have been omitted from the tables because the reports were questionable or unsatisfactory, so that the total, great as it is, is undoubtedly below the actual number of cases of tetanus that followed injuries incurred in Fourth of July celebrations. For purposes of comparison, to be made later, a number of deaths from tetanus caused by other than Fourth of July injuries have been included, but they have not been given numbers in the series:

TABLE 1.

	Name.	Age.	Cause of Wound.	Site of Wound.	Duration.	Result. (x) is death.
	CALIFORNIA.					
1	Kerr	12	toy pistol	......	11	x
2	Brown	..	pistol	......	..	x
	Raffino	..	burn	......	..	rec.*
	* Not July 4th accident.					
	COLORADO.					
1	Gurley	10	fireworks	......	..	x
2	Lord	13	toy pistol	......	..	..
3	Millhouse	11	blank cart.	hand	..	x
4	Fontine	..	blank cart.	arm	..	....
	CONNECTICUT.					
1	Cunningham	14	blank cart.	......	10	x
2	McGlone	11	blank cart.	hand	12	x
3	Curriesge	7	blank cart.	hand	9	x
	DISTRICT OF COLUMBIA.					
1	Symonds	19	chemical	many	11	x*
	* Explosion of chemicals buried under mound of dirt.					
	IDAHO.					
1	Maupin	..	toy pistol	hand	12	x
	ILLINOIS.					
1	Crosson	15	toy pistol	hand	7	x
2	Jones, Wm	8	blank cart.	hand	7	x
3	Koncizka	11	toy pistol	hand	7	x
4	Matejcak	11	toy pistol	hand	6	x
5	Stolls	17	nail	hand	6	x*
6	Brown, Michael	..	blank cart.	hand	7	x
7	Dahlberg	12	toy pistol	hand	6	x
8	Beckmann	9	blank cart.	thigh	8	x
9	Emerich	8	toy pistol	hand	8	x
10	Osborn	12	blank cart.	hand	10	x
11	Johnson, A	11	blank cart.	......	19	x
12	Rimek	22	blank cart.	hand	8	x
13	Chalowtek	25	fire cracker	hand	9	x
14	Dolan, Thomas	13	blank cart.	hand	10	x
15	Noston	15	blank cart.	hand	9	x
16	Goad	14	toy pistol	hand	10	x
17	Lau, Emil	12	blank cart.	hand	10	x†
18	Watson	9	blank cart.	hand	10	x
19	Warentbee	16	toy pistol	hand	10	x
20	Winke	11	blank cart.	hand	10	x
21	Weddeman	14	fire cracker	hand	10	x
22	Granger	12	toy pistol	hand	..	x
23	Tarbell	6	toy pistol	hand	..	x
24	Olean	10	toy pistol	hand	..	x
25	Easton	10	toy pistol	thigh	10	x
26	Golden, Jeanette	17	blank cart.	......	13	x
27	Schmetzer	10	toy pistol	......	8	x
28	Drake	9	blank cart.	leg	14	x
29	Johnson, H	12	toy pistol	hand	9	x‡
30	Webb	15	blank cart.	hand	9	x
31	Austin	..	toy pistol	hand	..	x
32	Crow	8	toy pistol	......	..	x
33	Friese	13	toy pistol	hand	9	x
34	Armstrong	..	toy pistol	hand	12	....
35	Hofden	14	blank cart.	hand	7	x
36	Ludwig	..	revolver	hand	..	x
37	Volk	14	toy pistol	hand	19	x
38	Coppenbarger	8	blank cart.	hand	10	x
39	Blaidsdell	9	toy pistol	hand	..	x
40	Henderson	13	blank cart.	......	..	x
41	Remington	14	blank cart.	hand	10	x
42	Peisker	16	blank cart.	hand	6	x
43	Olson	..	blank cart.	foot	..	....
44	Dicks	15	blank cart.	hand	..	x
45	Naretwinski	12	fire cracker	hand	16	x
46	Stanton	13	blank cart.	hand	..	x
47	Swadley	14	toy pistol	hand	..	....
48	Hogan	10	toy pistol	......	21	x
49	Suchoyda	..	fire cracker	chest	9	x
	Jahns	6	splinter	foot	11	x
	Balky	..	nail	thumb	13	x
	Ditton	10	nail	foot	..	x
	* Running from cannon fell and nail entered hand. † Exploded between stones. ‡ Shot dirt into hand with toy pistol.					
	INDIANA.					
1	Davisson	11	toy pistol	leg	7	x
2	Winski	11	blank cart.	hand	6	x
3	Newman	12	blank cart.	hand	6	x
4	Dick	15	toy pistol	hand	..	x
5	Hostetler	14	toy pistol	hand	11	x
6	Piper	11	blank cart.	leg	9	x
7	Hiers	12	toy pistol	......	..	x
8	Allen	..	blank cart.	hand	..	x
9	Kabrich	12	blank cart.	hand	10	x
10	Stephens	11	toy pistol	......	14	x
11	Fedoras	7	blank cart.	hand	..	x
	Wolf	30	hay fork	......	..	x
	INDIAN TERRITORY.					
1	Owens	14	blank cart.	hand	8	x
	IOWA.					
1	Anderson, J	10	toy pistol	hand	..	x
2	Wickman	..	cannon	ankle	10	x*
3	Anderson, G	12	cannon	......	10	x
4	Clark	15	toy pistol	hand	..	x
5	Boeson	8	toy pistol	hand	..	x
6	Phelps	9	blank cart.	hand	10	x
7	Rowley, Atlanta	12	toy pistol	hand	7	x

	IOWA—*Continued.* NAME.	Age.	Cause of Wound.	Site of Wound.	Duration.	Result. (x) is death.
8	Crisman	9	blank cart.	hand	7	x
9	Hiatt	12	blank cart.	hand	9	x
10	Stamy	13	toy pistol	hand	7	x
11	Gettin	14	toy pistol	hand	7	x
12	Lawhorn	35	blank cart.	hand	12	x
13	Rowland. Gladys	12	toy pistol	hand	10	x
14	Campbell	14	toy pistol	hand	..	....
	* Gas-pipe cannon.					
	KANSAS.					
1	McNish	11	toy pistol	hand	6	x
2	Hammond	11	toy pistol	hand	20	x
3	Mumford	13	toy pistol	hand	13	x
4	Goodseal	11	blank cart.	hand	7	x
5	Bennett	21	blank cart.	......	..	x
6	Ishman	11	blank cart.	......	..	x
7	Boyle	8	blank cart.	hand	8	x
8	Forbes	..	blank cart.	hand	11	x
9	Horr	15	toy pistol	......	11	x
10	Kotwitz	45	fire cracker	hand	16	x
11	Miller	..	toy pistol	......	..	x
	KENTUCKY.					
1	Schaffer	13	toy pistol	......	7	x
2	McNichols	5	blank cart.	hand	7	x
3	Runyon	10	blank cart.	hand	6	x
4	Shearer	11	toy pistol	thigh	16	x
	MAINE.					
1	Lacourse	35	blank cart.	hand	7	x
2	Russell	12	blank cart.	......	9	x
	MARYLAND.					
1	Anderson	12	cannon	......	21	x
	Rodney	..	machine	......	10	x
	MASSACHUSETTS.					
1	Brodeur	9	toy pistol	hand	11	x
2	Babcock	14	blank cart.	hand	11	x
3	O'Connell	11	blank cart.	hand	10	x
4	Milbier	7	blank cart.	hand	7	x
5	Foster	11	blank cart.	hand	7	x
6	Landry	15	blank cart.	hand	10	x
7	Becker	10	blank cart.	hand	11	....
8	Pallette	12	blank cart.	hand	8	x
9	Honiper	10	blank cart.	hand	..	....
10	Burden	10	blank cart.	......	9	x
11	Thomson	9	blank cart.	hand	8	x
12	Ward	10	....	......	8	x
13	Powers	15	blank cart.	hand	12	x
14	Bridgewater	34	fireworks	leg	7	x*
15	Lajeunesse	14	blank cart.	hand	8	x
16	Farson	12	toy pistol	hand	8	x
	* Died in New York.					
	MICHIGAN.					
1	Daniels	9	blank cart.	hand	5	x
2	Baker	14	blank cart.	leg	..	x
3	Danielson	9	toy pistol	leg	7	x
4	Burke	12	toy pistol	hand	..	x
5	Hathaway	17	toy pistol	......	9	x
6	De Young	12	blank cart.	......	9	x
7	Pierson	15	blank cart.	thigh	19	x
8	Salm	10	toy pistol	hand	16	x
9	Hinline	..	blank cart.	hand	7	x
10	Snow	8	toy pistol	hand	8	x
11	Price	13	....	......	..	x
12	Ogusharetz	12	toy pistol	hand	8	x
13	May	14	toy pistol	hand	9	x
14	Randall	9	blank cart.	hand	..	x
15	Miller	11	toy pistol	......	..	x
16	Traynor	8	....	......	..	x
17	Mortenson	19	toy pistol	hand	18	x
18	Vandervelt	14	toy pistol	hand	6	x
19	Gray	19	blank cart.	hand	10	x
20	Hunt	15	toy pistol	......	8	x
21	Love	6	....	hand	9	x
22	Finch	18	toy pistol	hand	8	x
23	Stambaugh	12	blank cart.	hand	9	x
24	Webster, Jennie	6	toy pistol	hand	10	x
25	Marshall	10	blank cart.	......	10	x
26	Parrish	12	blank cart.	hand	11	x
27	Tiaskorpi	30	fire cracker	hand	10	x
28	Clark	..	....	hand	..	*
29	Norris	..	blank cart.	hand	..	x
	* Recovering.					
	MINNESOTA.					
1	Wahlquist	50	blank cart.	finger	9	x
2	Zimmerman	11	file	hand	14	x*
3	Jensen	13	blank cart.	hand	12	x
4	Richards	13	blank cart.	hand	14	x
5	Fullerton	10	blank cart.	hand	6	x
6	Smith	14	blank cart.	hand	9	x
7	Lorenz	12	blank cart.	hand	7	x
8	Graham	11	blank cart.	hand	..	x
9	Fohrman	11	blank cart.	hand	6	x
10	Spearin	9	blank cart.	hand	14	x
11	Roberts	16	....	......	12	x
12	Thomas	12	blank cart.	hand	..	....
13	Bassett	9	blank cart.	hand	9	x
14	Soderland	17	blank cart.	......	..	x
15	Russell	12	blank cart.	......	..	rec.
	McDermott	4	wagon	foot	..	x
	* Using file to enlarge bore of toy pistol.					
	MISSOURI.					
1	Pemberton	7	toy pistol	hand	..	x
2	Smith	14	blank cart.	hand	8	x

	MISSOURI—*Continued.* NAME.	Age.	Cause of Wound.	Site of Wound.	Duration.	Result. (x) is death.
3	Lease	15	blank cart.	hand	12	x
4	Brennan	18	blank cart.	leg	8	x
5	Zunnstein	8	blank cart.	hand	8	x
6	Hudgens	..	....	......	..	x
7	Decker	..	....	......	..	x
8	Smith, William	9	blank cart.	hand	8	x
9	Deval	..	....	......	..	x
10	Mengerson	..	....	......	..	x
11	Roes	14	blank cart.	hand	..	x
12	Harris	..	....	......	..	x
13	Bottum	7	blank cart.	hand	..	rec.*
14	Finkelstein	12	blank cart.	hand	12	x
15	Gage	15	blank cart.	hand	..	x
16	Pomeroy	15	blank cart.	hand	11	x
17	Morrison	..	blank cart.	hand	8	x
18	Austin	10	blank cart.	......	9	x
19	Bennett	22	blank cart.	hand	6	x
20	Ishmal	..	blank cart.	hand	..	....
21	Griswell	12	toy pistol	hand	..	x
22	Burns	12	blank cart.	hand	..	x
23	Magnuson	21	blank cart.	hand	19	x
24	Bland	10	blank cart.	hand	13	x
25	Bonaparte	11	toy pistol	hand	..	....
26	Weiss	..	blank cart.	hand	21	x
27	Williams	24	blank cart.	neck	..	....
28	Helbing	19	blank cart.	hand	..	rec.†
29	Butler	..	....	......	..	x
	* Large quantities of antitoxin. † Incubation 17 days.					
	MONTANA.					
1	Thompson	..	blank cart.	hand	10	x
2	Passenberger	12	blank cart.	hand	11	x
	NEBRASKA.					
1	Harris	12	....	......	..	x
2	Hill	..	blank cart.	hand	7	x
3	Harms	13	toy pistol	......	..	x
4	Carey	11	toy pistol	hand	9	x
	NEW HAMPSHIRE.					
1	Dufraine	11	....	......	6	x
2	Dobson	13	blank cart.	hand	8	x
	NEW JERSEY.					
1	Van Ness, Mrs.	32	fire cracker	hand	8	x
2	Case	12	fire cracker	hand	8	x
3	Pawaro	12	blank cart.	hand	11	x
4	Hanson	12	blank cart.	hand	6	x
5	Hughes	15	blank cart.	......	13	x
6	Reed	18	blank cart.	hand	8	x
7	Huber	12	blank cart.	hand	..	....
8	McClure	12	blank cart.	hand	..	x
	NEW YORK.					
1	Maloney	21	....	hand	7	x
2	Anderson, J. C.	..	....	hand	..	x
3	Gypson	12	blank cart.	hand	7	x
4	Graham	5	blank cart.	hand	10	x
5	McGill	14	blank cart.	hand	..	x
6	Monaco	14	blank cart.	......	9	x
7	Horton	23	fire cracker	hand	24	x
8	White, Carrie	17	toy pistol	hand	..	rec.*
9	Bygden	18	toy pistol	hand	..	rec.*
10	Lawrence, J	10	toy pistol	hand	7	x
11	Kaman	9	toy pistol	hand	7	x
12	Wolfe	9	....	......	..	x
13	Sweitzer, Mrs.	..	blank cart.	hand	..	x
14	Young	..	toy pistol	hand	..	x
15	Ward	..	blank cart.	hand	10	x
16	Signor	10	blank cart.	hand	8	x
17	Marks	10	blank cart.	hand	8	x
18	Englehart	14	blank cart.	leg	8	x
19	Dunn	..	blank cart.	hand	7	x
20	Chadwick	8	toy pistol	......	..	x
21	Fitzgerald	9	toy pistol	abdom.	9	x
22	Bishop	13	toy pistol	......	9	x
23	Abbott	37	toy pistol	hand	11	x
24	Jacobson	4	toy pistol	thigh	10	x
25	Packingham	24	blank cart.	hand	19	x
26	Messler	8	blank cart.	hand	16	x
27	Ryan	..	toy pistol	hand	..	....
28	Blauvelt	10	toy pistol	hand	7	x
29	Norman	12	cannon	hand	..	x
30	White, James	9	blank cart.	hand	..	x
31	Stark	24	fire cracker	hand	13	x
32	Howcroft	12	toy pistol	hand	18	x
33	Forsythe	16	blank cart.	hand	17	x
34	Van Dyk	18	blank cart.	hand	20	x
35	Rhodes	9	blank cart.	hand	..	....
36	Smith, Milton	..	....	......	..	rec.
	Watson, William	12	fall	arm	..	x†
	* Antitoxin, intraspinal. † Compound fracture.					
	OHIO.					
1	Detlefsen	16	toy pistol	hand	..	x
2	Simmons	14	toy pistol	hand	19	x
3	Newton	..	....	......	..	x
4	Drouth	11	blank cart.	hand	8	x
5	Poole	12	blank cart.	hand	10	x
6	Beans	13	toy pistol	hand	..	x
7	Fostmyer	50	blank cart.	hand	9	x
8	Myers	15	toy pistol	......	13	x
9	Willows	6	toy pistol	hand	11	x
10	Bewley	16	blank cart.	hand	11	x
11	McCrum	17	blank cart.	hand	11	x
12	Ward	13	blank cart.	hand	12	x
13	Ramsey	14	toy pistol	hand	5	x

OHIO—*Continued.*

	Name.	Age.	Cause of Wound.	Site of Wound.	Duration.	Result. (x) is death.
14	Bemis	12	blank cart.	hand	7	x
15	Howard	15	blank cart.	hand	7	x
16	Montgomery	..	blank cart.	hand	..	....
17	Ragan	..	blank cart.	hand	..	x
18	Tedesco	..	blank cart.	hand	..	x
19	O'Keefe, James	45	blank cart.	hand	21	x
20	Scharnhorst	13	blank cart.	hand	..	x
21	Bassenbach	20	blank cart.	hand	..	x
22	Montkofski	13	toy pistol	hand	20	....
23	Hines	9	toy pistol	hand	..	x
24	Garrity	12	toy pistol	hand	..	x
25	Walker	7	toy pistol	hand	11	x
26	Packingback	..	toy pistol	hand	..	x
27	King	14	dyn. cane	foot	..	x
28	Duguid	10	blank cart.	hand	..	x
29	Raitz	9	blank cart.	hand	10	x
30	Brighmeyer	13	toy pistol	leg	7	x
31	Grenier	17	powder ex.	hand	7	x*
32	Dodeska	9	blank cart.	......	..	x
33	Grodack, Minna	18	blank cart.	hand	..	x
34	Scoville	8	blank cart.	groin	..	x
35	Raitz	9	toy pistol	hand	10	x
36	Ringle	8	blank cart.	hand	..	x
37	Krautter	12	blank cart.	hand	7	x
38	Grdina	6	toy pistol	hand	..	x
39	Wright	20	blank cart.	hand	11	x
40	Sherman	10	toy pistol	......	..	x
41	Bentley	10	toy pistol	hand	8	x
42	Burdeen	9	toy pistol	abdom.	..	x
43	Gozdamozitz	25	toy pistol	......	..	x
44	Hoffman	12	toy pistol	hand	7	x
45	Young	15	toy pistol	......	6	x
46	Richardson	14	toy pistol	hand	..	x
47	Wilson, William	..	toy pistol	......	..	x
48	Pifer, William	10	toy pistol	hand	..	x
49	Moore	12	toy pistol	hand	..	x
50	Arnold	..	toy pistol	hand	8	x
51	Lucksinger	14	toy pistol	hand	..	x
52	Bennett	22	blank cart.	hand	6	x
53	Kelley	7	toy pistol	hand	12	....
54	Churchword	..	blank cart.	hand	..	x
55	Weirer, E	8	blank cart.	back	..	x
56	Litowski	12	toy pistol	......	14	x
57	Stasko	14	toy pistol	......	18	x
58	Mathers	34	blank cart.	hand	..	x
59	Frank, B	13	blank cart.	hand	..	x
60	Keller, A	11	....	hand	..	x
61	Butzkowski	11	toy pistol	......	..	x
62	Wheeler	10	blank cart.	chest	..	x
63	Kiger, H	17	blank cart.	hand	..	rec.
64	Steiner, Edward	12	bullet	thigh	16	x†
65	Servison	..	toy pistol	......	23	x
66	Heckinger	..	toy pistol	......	..	....
67	Brown, D	..	toy pistol	hand	..	x
	Kassenbrock	7	stick	neck	9	x
	Thomas	40	nail	foot	30	x
	Hollingsworth	..	fracture	leg	..	....
	Beckerton	22	nail	foot	..	....

* Pieces of broken glass entered hand. † Fractured femur with bullet.

OREGON.

	Name.	Age.	Cause of Wound.	Site of Wound.	Duration.	Result. (x) is death.
1	Wert, C	13	toy pistol	hand	11	x
2	Struble	14	toy pistol	hand	11	x

PENNSYLVANIA.

	Name.	Age.	Cause of Wound.	Site of Wound.	Duration.	Result. (x) is death.
1	Pollack	40	toy pistol	hand	5	x
2	Karmel	10	toy pistol	hand	8	x
3	Banks	6	toy pistol	hand	8	x
4	Beam	10	blank cart.	hand	5	x
5	Lafield	12	....	hand	6	x
6	Monroe	12	shotgun	leg	6	x
7	Johnson, James	13	toy pistol	hand	6	x
8	Breist	7	toy pistol	......	23	x
9	McHugh	7	toy pistol	hand	14	x
10	Kenny	9	toy pistol	hand	..	rec.
11	Nettle	12	blank cart.	hand	14	x
12	Seeben	9	toy pistol	hand	..	x
13	Hally	8	toy pistol	hand	..	x
14	Hoffmeister	6	blank cart.	hand	6	x
15	Fois	16	toy pistol	......	..	x
16	Comstock	10	toy pistol	......	..	x
17	Claridge	15	toy pistol	leg	9	x
18	Habel	12	toy pistol	......	..	x
19	Ward	19	blank cart.	hand	10	x
20	Innes	10	toy pistol	hand	9	x
21	Kopeckic	6	fire cracker	......	9	x
22	Brader, Jessie	19	blank cart.	hand	20	x
23	Zeidner	23	blank cart.	hand	9	x
24	White	15	toy pistol	hand	9	x
25	Huber	11	blank cart.	hand	9	x
26	McGuire	10	toy pistol	hand	9	x
27	Ragland	13	blank cart.	hand	8	x
28	Piscioni	18	fire cracker	hand	8	x
29	Wissler	16	blank cart.	hand	8	x
30	Zimmerman	12	toy pistol	hand	8	x
31	Arnold	8	toy pistol	......	8	x
32	Lee, John	10	blank cart.	......	8	x
33	Meiley	13	toy pistol	hand	8	x
34	Lamb	12	blank cart.	hand	9	x
35	Roe, David	19	blank cart.	hand	10	x
36	Reinhart	15	....	......	11	x
37	Harman, Ira	13	toy pistol	hand	11	x
38	Boasler, Agnes	25	blank cart.	breast	9	x
39	Nelson	6	toy pistol	hand	9	x
40	Carlin	13	toy pistol	hand	..	x
41	Caffrey	14	toy pistol	hand	10	x
42	Snow, Roy	14	toy pistol	hand	9	x
43	Thomas, Lot	17	toy pistol	hand	..	x
44	Steventon	11	toy pistol	hand	8	x
45	Revels	12	blank cart.	hand	7	x
46	Bickerstaff, Ida	26	blank cart.	hand	9	x
47	Corwin, Frank	14	toy pistol	hand	..	x
48	Roe, Wilmer	12	toy pistol	hand	..	x
49	Lavell, Michael	12	blank cart.	hand	..	x
50	Kubelciez	7	....	hand	8	x
51	Reilly, Thomas	15	fire cracker	hand	11	x
52	Dymond	..	blank cart.	hand	7	x
53	Whiting	15	blank cart.	hand	6	x
54	Gorman	12	blank cart.	hand	13	x
55	Creely	12	toy pistol	......	14	x
56	Kiefer	..	toy pistol	......	..	....
57	Wehrman	10	toy pistol	hand	26	x
58	Costello	10	blank cart.	hand	8	x
59	Cohn, Joseph	9	toy pistol	hand	5	x
60	Loughry	9	fire cracker	hand	4	x
61	Rust	13	blank cart.	hand	14	x
62	McCoy	12	toy pistol	hand	13	x
63	Specock	37	toy pistol	hand	20	....
64	Rankin	33	toy pistol	hand	8	x
65	Johnson, Leroy	12	blank cart.	thigh	..	....
66	Hazel	10	toy pistol	hand	..	....
67	McConn	..	toy pistol	hand	..	x
68	Tuskas	12	toy pistol	mouth	..	x
69	Ricca	13	toy pistol	hand	..	x
70	Butler	10	toy pistol	hand	..	x
71	Nagle	14	blank cart.	hand	..	x
72	Longwell	11	blank cart.	......	10	x
73	Cox	10	blank cart.	hand	..	x
74	Briglia	14	blank cart.	hand	..	x
75	Gosnell	14	toy pistol	......	..	x
76	McHugh	7	toy pistol	hand	21	x
77	Carrington, Viola	16	toy pistol	hand	20	x
78	Loucks	12	blank cart.	hand	..	rec.
79	Cohen, Harry	8	toy pistol	......	12	x
80	Carney	10	toy pistol	head	..	....
81	Bittenbender	8	toy pistol	hand	26	x
82	Fauzy	7	blank cart.	hand	21	x
	Weeks	..	machine	......	30	x*
	Knittel	..	machine	hand	..	x†
	Prosser	14	bruise	finger	..	....
	Smith, Jacob	50	nail	foot	..	x

* Planing mill. † Paper mill.

RHODE ISLAND.

	Name.	Age.	Cause of Wound.	Site of Wound.	Duration.	Result. (x) is death.
1	Corozza	..	toy pistol	hand	13	x
2	Hansen	..	toy pistol	......	..	x
3	Pierce	15	cannon	hand	..	....

VERMONT.

	Name.	Age.	Cause of Wound.	Site of Wound.	Duration.	Result. (x) is death.
1	Limoge	13	blank cart.	hand	8	x
2	Morris	..	blank cart.	hand	9	x
3	Bini	21	blank cart.	hand	16	x

WASHINGTON.

	Name.	Age.	Cause of Wound.	Site of Wound.	Duration.	Result. (x) is death.
1	Ennis	12	fire cracker	hand	..	x
2	......	..	toy pistol	hand	..	x*

* Case at Everett.

WEST VIRGINIA.

	Name.	Age.	Cause of Wound.	Site of Wound.	Duration.	Result. (x) is death.
1	Hayes	18	blank cart.	hand	6	x
2	Kearns	..	blank cart.	thigh	10	x
3	Griffith	..	blank cart.	hand	..	x

WISCONSIN.

	Name.	Age.	Cause of Wound.	Site of Wound.	Duration.	Result. (x) is death.
1	Brown	9	blank cart.	......	11	x
2	McGuire	10	blank cart.	hand	8	x
3	Stendler	11	....	......	10	x
4	Hinca	12	fire cracker	hand	..	x
5	Sebruck	15	blank cart.	leg	9	x
6	Neahls	11	blank cart.	hand	9	x
7	Fedoras	7	blank cart.	hand	..	x
8	Howard	16	blank cart.	hand	16	x
9.	Wesierski	9	toy pistol	hand	..	x
10	Boucha	13	fire cracker	hand	19	x

In this table have been inserted such data as were obtained from the case reports. Those that were not given, or on which there were conflicting statements, have been omitted. The cause of injury is stated as it was reported, but whether the cause is given as toy pistol, pistol, or blank cartridge, it indicates in each case a wound produced by a blank cartridge. Under the heading of duration the figures indicate approximately the number of days elapsing between the receipt of the wound and the death of the patient, for the information obtained often did not give distinctly the number of days of incubation elapsing before the onset of symptoms. In the columns of results, × indicates a fatal outcome.

Distribution.—It will be noted that the Southern states are quite free from deaths of this sort, due to the fact that the blank cartridge celebration of Independence Day is not the custom in the South. A few such cases follow the Christmas celebration, but as the noise of this celebration is mostly obtained through other means, tetanus is not common. In the Northern states the number varies somewhat according to the population of the states, but by no means strictly so, as will be seen from this table:

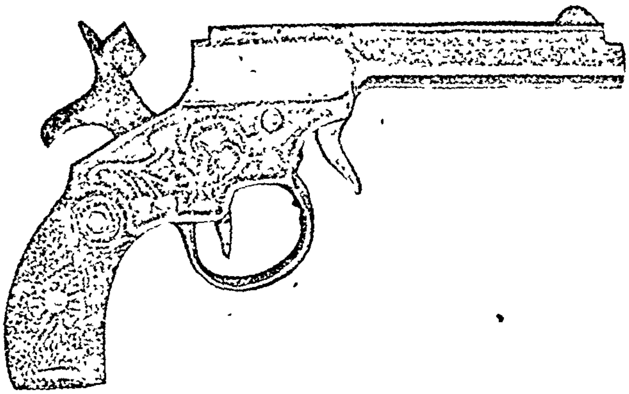
Table 2.

Pennsylvania	82	Connecticut	3
Ohio	67	Rhode Island	3
Illinois	49	Vermont	3
New York	36	West Virginia	3
Missouri	29	California	2
Michigan	29	New Hampshire	2
Massachusetts	16	Maine	2
Minnesota	15	Montana	2
Iowa	14	Oregon	2
Indiana	11	Washington	2
Kansas	11	District of Columbia	1
Wisconsin	10	Maryland	1
New Jersey	8	Indian Territory	1
Colorado	4	Idaho	1
Kentucky	4		
Nebraska	4	Total	415

New York had less than half as many deaths as Pennsylvania. and but little more than half as many as Ohio. Massachusetts also is below the number that might be expected from its population. Ohio shares with Pennsylvania a greatly excessive death rate. Otherwise the number of cases bears a fair relation to the population of the states. There are but a few Northern states from which there have been no deaths reported, namely. Wyoming, Utah. North and South Dakota, and Nevada, the small population of each of these states probably explaining the escape. The great number of cases in Pennsylvania and Ohio amounts almost to an epidemic, and no satisfactory explanation seems to have been given.

Age.—The age of the victims is, of course, low, for, with but few exceptions, they were small boys playing with toy pistols. There were a few girls, indicated in the table by the use of the full name, who attempted to emulate the boys, and suffered the penalty. A few adults also were included; they received their wounds in various ways, some, like the boys, through trying to use blank cartridges, some from other sorts of explosions.

Nature of the Wound.—The overwhelming frequency of the blank cartridge wound as the source of tetanus is evident from the tables. Of the cases in which information on this point was obtained there were 358 blank cartridge or toy pistol wounds, and but 29 said to be from other causes. In not a few instances, furthermore, in which the original report gave the cause as firecracker or some cause other than blank cartridge, subsequent information showed that after all the blank cartridge was the real offender, so it is possible that the proportion of cases produced by blank cartridges is even greater than these figures indicate. Reports of injuries by toy pistols have been accepted as indicating wounds produced by blank cartridges, for the reason that all the toy pistol injuries that have been followed up have turned out to be due to blank cartridges. The term "toy pistol" has an indefinite meaning, for it includes both the little affairs used for exploding flat paper caps as well as pistols manufactured for the use of 22-caliber cartridges. As a result many people have come to believe that the paper cap pistol is the offending weapon, which is incorrect. So far as it has been possible to learn, this sort of explosive does not produce any injuries sufficient to cause tetanus. Of the entire series of this year there seems to have been none attributed to paper caps. The toy pistol that most frequently causes tetanus is the flimsy, single-barrelled device, built to fire 22-caliber blank cartridges. It is of extremely cheap construction, selling for 10 to 25 cents generally. Very few cases are due to bursting of the weapon, as seems to be thought by some, but most of them are entirely due to the carelessness of the users, who get their hands in front of the muzzle at the time of the explosion. This accident is favored by the shortness of the barrel, the manner of loading, and the frequence with which the pistol gets out of order through fouling or poor construction. Many of the accidents occur when the pistol is held in both hands in trying to overcome some defect in the mechanism. Many accidents, however, were produced by the better grade weapons, both 22-caliber revolvers, and even by larger caliber weapons. The added complication furnished by the revolving mechanism gives many opportunities for accidents, but their greater expense keeps them out of the hands of small boys to a considerable extent. Of the remaining cases not caused by blank cartridges by far the greater part (17) were due to the explosion of fire crackers, usually giant crackers that lacerated the hands severely. There were also a few from cannons (5), and from burns with fireworks. This subject will be considered further in discussing the etiology of Fourth of July tetanus.


The murderous toy pistol.

Location of the Wounds.—That nearly as large a proportion of wounds occurred on the hands as were caused by blank cartridges is to be explained as effect and cause. Most frequently, as before mentioned, one hand was placed in front of the muzzle accidentally, and received the wad oftenest in the palm of the left hand. The left forefinger and thumb were next most frequently injured. Not a few boys, however, deliberately placed the muzzle of the pistol against the hand and fired it, supposing that since it contained no bullet it would do no harm. Other boys were shot by their playmates in struggles to obtain possession of the plaything, or in attempting to frighten one another. The greater frequency of tetanus in wounds of the hands is probably not due to a greater danger in such wounds, but to their more common occurrence. Tetanus is as frequent after wounds in other parts of the body as we should expect it to be if occurring in proper ratio to the frequency of location of wounds of these parts, but no figures can be obtained on this point. Tetanus has followed wounds of the leg, thigh, breast, abdominal wall and even of the mouth.

Duration.—The duration of the disease and its period of incubation in Fourth of July tetanus is very short. We are accustomed to consider, on good grounds, the ninth day of incubation as the turning point in estimating prognosis in traumatic tetanus. Cases with a shorter duration than that seldom recover, whereas, the more prolonged the onset is after the ninth day the better the outlook. By far the majority of the boys with Fourth of July tetanus have not only completed the incubation before that time, but have also completed the disease, and are dead. An incubation of but four or five days, with a duration of the disease of 24 to 72 hours is frequent. We are compelled to believe that incubation is shorter in small boys than in adults, for there seems to be in a rough way such a condition indicated by the figures for this epidemic. Presumably, the tetanus bacillus grows as rapidly in a child as in an adult, and, as it requires less of its toxin to saturate the nervous system of the child, the disease and the termination come sooner. But in any event it is evident that Fourth of July tetanus is of an extremely virulent type, with a short period of incubation and a brief duration. Its virulence is still more fully attested by the results, for recovery is remarkably seldom, so far as it has been possible to learn. In the table cases have been indicated as recovering only when definite information to this effect has been received. A number of cases that were reported as recovering, and also some the outcome of which was never reported, have been left blank. Only 7 have been definitely reported as entirely recovered. Undoubtedly there have been other recoveries, for cases that get well are not so certain to get into these statistics as those that die, but at the best it seems probable that the mortality is more likely to be above 95 per cent. than below it; certainly it is higher than 90 per cent. Whether this extremely high death rate is due to a slight resistance in children, or to a particularly virulent type of infection can not be estimated at this time, but probably both factors exist. Antitoxin was used freely, in several cases intracranially, but in general with little effect. The cases that did recover nearly all had antitoxin, but so many more had it without effect that we believe that it was, as a rule, of little assistance because administered so late in the disease. The chief exception is furnished by two patients of Luckett at the Harlem Hospital, New York, that recovered after the use of intraspinal injections of antitoxin. Luckett lays emphasis on the drainage of as much as possible of the toxic cerebrospinal fluid before injecting the antitoxin.

THE CAUSE OF FOURTH OF JULY TETANUS.

The reason for the existence of Fourth of July tetanus, as we may class these particular cases, is by no means settled, although its determination might seem easy. The question seems to have sifted down to the proposition that the bacilli either are or are not present in blank cartridges. If the former is true it is a simple proposition. But if they are not in the blank cartridges, there are several explanations for the frequency with which the wounds they produce are followed by tetanus to be considered.

The following facts speak in favor of the presence of the infectious agent in the blank cartridge: 1. The remarkable frequence of tetanus from blank cartridge wounds compared with its occurrence after other forms of injury. This has become apparent to everyone. None of the other Fourth of July injuries compares with it, and, although it is impossible to learn in how large a proportion of blank cartridge wounds lockjaw results, yet the impression is obtained that the famous rusty nail wound is far less often the cause of tetanus in proportion to its occurrence. 2. While the opponents of the view of the infectious nature of the blank cartridge consider the dirty hands of the wounded child the source of the organism, yet wounds of other parts are often the site of lockjaw. In the cases in this year's epidemic there are several of wounds of the leg and thigh, a few of the abdomen, one of the female breast, and one of the mouth, in all of which the conditions are quite different from those in the case of wounds of dirty hands. 3. The bacteriologist of the Board of Health of Newark, N. J., has presented the following report:

> Newark, N. J., July 2, 1903.
>
> *To the Honorable Board of Health, Newark, N. J.:*
>
> Your attention is respectfully invited to the fact that bacteriologic examination of samples of two different makes of blank cartridges has been made at the Bacteriological Laboratory during the past week with the result that among other germs present in the contents of the shells the bacilli of tetanus were found in large numbers.
>
> The tetanus bacilli found are so typical in shape and the odor so characteristic that there is very little doubt of their identity.
>
> The samples examined were purchased in the open market and the cartridges selected promiscuously from the contents of the boxes.
>
> The frequency with which lockjaw follows accidental wounds received by the explosion of blank cartridges may possibly be explained by the presence of these germs in the materials used in the manufacture of the cartridges.
>
> Further examinations will be made to determine if the tetanus bacilli are constantly present, and also to find whether the germs are in the explosive or in the paper wads used.
>
> R. N. Connolly, M.D., *Bacteriologist.*

If this report should be substantiated, as we shall further note, it stands alone in opposition to many other investigations. So far, we are informed, no inoculation experiments have been made, and organisms producing gas, and morphologically similar to the tetanus bacilli, have been described by Wells in blank cartridges, but they were non-pathogenic.

4. Several possible sources for the bacilli have been suggested. One is that the wads are made out of old rags, of straw swept from stables, or other dangerous material. Another is that they come from the saltpeter, which has been insufficiently purified after being obtained from its source from the droppings of bats in caves, etc.

Opposed to the view that the tetanus bacillus exists in the blank cartridge are the following facts:

1. Numerous careful investigations have been made of this possibility by different investigators, examining all the makes of ammunition on the market, during different years, in different cities, and by different methods, and all of them report unanimously (with the single exception noted) that they have never detected tetanus

bacilli. The investigations that we have found published in available literature are as follows:

Table 3.

Name.	Year.	Number Examined.	Method.
Wells	1899	200	Culture and inoculation.[1]
Taylor	1899	135	Culture.[2]
Wells	1900	50	Culture and inoculation.[3]
Boston City Health Dept.	1900	350	Culture and inoculation.[4]
LaGarde	1902	24	Culture and inoculation.[5]
Total		759	

A total of 759 blank cartridges have been examined during three years, and in not one has tetanus bacilli been found. It seems highly improbable that so many cartridges can have failed to contain bacilli if they are present in blank cartridges often enough to explain the frequent occurrence of tetanus after the wounds they produce. A possible source of error lies in the frequent occurrence of organisms resembling more or less closely the tetanus bacillus. These have been described in blank cartridges by Wells and by Bain;[6] each describing a different organism, both of which have considerable morphologic resemblance to the bacillus of tetanus, and also resembling it in being anærobic, so that they might readily be mistaken by a casual examination of smears from the pus or of anærobic cultures. In cultures, however, they show certain differences from the tetanus bacillus, and they are nonpathogenic. This may explain the positive finding in Newark, in which animal inoculations were not made.

2. By no means all of the Fourth of July tetanus cases are produced by blank cartridges. In this year's epidemic among the cases for which we have been furnished with a statement of the method of production, nearly 10 per cent. have been ascribed to other sorts of injuries, where any cause is mentioned at all. Of these, exploding giant crackers are the commonest cause. Of course, these offer much the same possibilities for contamination as blank cartridges, if not more. However, LaGarde, who examined the powder and paper from 30 fire crackers, representing six different kinds, failed to find the organisms. Explosions of cannons, rockets and other forms of fireworks have all caused fatal tetanus.

3. At the same time that tetanus is occurring from Fourth of July injuries it is also resulting from other injuries in the same places. Wells[7] has compiled statistics of the annual tetanus cases of New York, Chicago and Washington, and finds that there is a seasonal curve, the greater number by far occurring in summer. June, for example, furnishes nearly as many deaths as December, January, February and March together. In other words, Fourth of July tetanus accidents come just at the time of year when tetanus is most prevalent. There have been included in our tables a number of cases of tetanus resulting from other than Fourth of July accidents, and, therefore, not included in the summary, which shows that tetanus bacilli are widespread at that time, and may be inoculated from any sort of injury. It is interesting to note that the states with the greatest number of blank cartridge cases, Pennsylvania and Ohio, also furnish the largest number of cases of tetanus from wounds not related to the celebrations of the Fourth. A few special cases of Fourth of July tetanus that are of significance in this connection may also be cited:

> A boy in Chicago, running to get away from a cannon that was about to be discharged, fell and ran a nail into his hand. Tetanus followed and caused his death.
>
> In Pittsburg a boy was playing with a toy pistol under a bridge, when a trolley car running over it jumped the track and fell some distance to the ground, killing several passengers. The boy was not injured, but was so frightened that he caught his hand under the descending hammer of his pistol and received a small cut from which fatal tetanus resulted.
>
> A boy in Minnesota, while trying to enlarge the bore of his pistol with a file, drove the tool into the palm of his hand, the wound causing death from tetanus.
>
> In Washington, D. C., where 4th of July tetanus is very uncommon, presumably because the laws are enforced, a young man with a chemical turn of mind, constructed an amateur Mt. Pelee by erecting a mound of earth over a collection of chemicals. The explosion shattered the glass containers and drove several pieces of glass, more or less covered with dirt, into his body. Fatal tetanus followed.
>
> In Rockford, Ill., a boy loaded a toy pistol with dirt and pebbles, and shot the contents into his hand. A pebble was removed from the hand, but no wad, after the onset of tetanus.

These cases are but samples of many that go to show that tetanus bacilli are present in the street dirt and about the persons of the celebrators. As further evidence we have the fact that in all the places where Fourth of July tetanus occurs the disease is more or less endemic, and if not seen in practice it will be found to occur in horses. In studying the Chicago epidemic no difficulty was found in demonstrating the organisms in street dirt in 1900.

4. The manufacture of blank cartridges is so conducted as to cause little chance for infection with the tetanus bacilli. While, of course, no special precautions are taken to keep out the organisms, and, therefore, the materials are by no means sterile, yet there is no step in the process that would particularly favor the presence of tetanus bacilli, as, for example, would be the case if hair were used, as in the wadding of shotgun ammunition. The pasteboard wads of the blank cartridges have always aroused much suspicion, both because they are so often found in the wounds, and because we have distinct impressions of the sort of material the "rag man" used to collect for the purpose of making paper. We are indebted to the Union Metallic Cartridge Company for the following description of the process:

> This board is made of new rags and new cuttings of paper, and also sulphite wood pulp. The rags are cooked in soda ash and lime under high pressure, in a rotary boiler for six or eight hours. They are then put into a washer and thoroughly washed for a couple of hours or more and bleached with chlorid of lime and alum. The paper stock is also cooked in the same manner, but without chemicals being put with it—simply boiled under high pressure. The rags after being boiled are let down into draining chests and thoroughly drained before being mixed with the paper stock in the manufacture of the board. No clay whatever is put into the board, and the coloring matter is a very weak solution of anilin blue, the color being set with a little alum. Generally this board is dried in the loft, although when necessary heat is applied.

It is evident that if even so resistant an organism as the tetanus bacillus were present in the original ma-

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1. Phila. Med. Jour., June 16, 1900.
2. N. Y. Med. Jour., July 20, 1901.
3. Med. News, June 1, 1901.
4. Report of Boston Health Department, 1900.
5. The Journal, Amer. Med. Asso., April 18, 1903.
6. Jour. Boston Soc. of Med. Sciences, 1901, p. 506.
7. American Medicine, June 13, 1903.

terial, and there is no apparent reason why they should be present, they could not survive such treatment as here described. As to the powder, LaGarde says:

> The purity of powder is assured by the high degree of heat to which the three ingredients of the powder are subjected before being incorporated in the form of an explosive compound. These ingredients, as is well known, are, saltpeter, 15 per cent.; sulphur, 10 per cent., and charcoal, 75 per cent. In refining saltpeter the saturated solution of the crude material is heated to a temperature of 250 F., the sulphur is fused from the crude brimstone, in order to remove extraneous matter, and the charcoal is obtained from willow wood after being subjected to a high temperature in a retort.

In all the studies of blank cartridges cited above the powder has come in for investigation, and tetanus bacilli never found. If impure saltpeter were a source of danger we should look for the greatest trouble to come from firecracker explosions, for they are, or at least were, prepared with a much more crude powder than the blank cartridges.

The shells are also subjected to a high temperature and to immersion in baths of strong acid and alkali. They, too, have been often examined with negative results.

On the other hand, it is to be borne in mind that there is not sufficient heat generated in the discharge of the cartridge to destroy tetanus bacilli if they were present in the powder or wads. LaGarde has shown, experimentally that the organisms when placed on the wads or in the powder of 22-caliber blank cartridges are not destroyed by firing. Such infected cartridges, when discharged in such a way as to injure rats, caused nearly all to die of tetanus.

From all these facts we may conclude that there is no convincing evidence that blank cartridges contain tetanus bacilli, except possibly as a rare contamination when they have been exposed to dirt. On the other hand, there is ample evidence to indicate that tetanus bacilli are present in the street dirt and on the persons and clothing of the injured people. The most reasonable assumption at this time is, therefore, that the organisms are carried into the wounds from the surface at the time of the accident. This has been the conclusion of LaGarde, Wells and all others who have studied this subject experimentally.

The question to be decided is, therefore, why blank cartridge wounds should be peculiarly dangerous, and to this the most plausible explanation seems to be twofold. 1. The wound is received at a time of year when tetanus bacilli are most prevalent, probably because the street dirt that contains them is widely scattered, instead of being frozen solid as in winter, or wet as in spring. It is also received at a time when the victim is usually particularly well supplied with this dangerous dirt. 2. Blank cartridge wounds offer the most ideal conditions for the development of tetanus of any common wound with which we are familiar. If we consider what are ideal conditions for the development of tetanus it will be seen how true this statement is. Ideal requirements call for the following conditions:

(a) First of all the wound should be penetrating, so that anærobic conditions may obtain. Blank cartridge wounds are nearly all penetrating, especially those that cause tetanus. Often, indeed, they pass through the palmar fascia, and usually the track is well sealed after them.

(b) The penetrating object should carry in any surface dirt present. A nail wound, with its well-known tendency to cause tetanus, can not compare with the blank cartridge in this respect. The wad, usually striking perfectly flat, has a great tendency to punch out and carry before it a disk of skin or of clothing that may oppose it, which a nail would push aside.

(c) Resistance of the tissues should be lessened. Here, especially, the blank cartridge wound surpasses the nail wound. Tetanus bacilli or spores, washed free from toxins, and injected with a minimum injury to the tissues can be destroyed in large numbers by the tissues or blood. Blood clots in a wound are particularly favorable, places for infection. Lwowitch and Strich have each shown that tetanus inoculation in animals is far more effective if made into a hematoma than if introduced subcutaneously, and the latter further found that gunshot wounds were much better inoculation places than even hematomas, the symptoms appearing twice as soon and death ensuing earlier. LaGarde found that burning tissues made them most favorable sites for tetanus inoculation. All animals inoculated in a wound made by burning died from doses of tetanus bacilli that were without effect when inoculated into incised wounds. Therefore, the burning, tearing and bruising of the tissues in blank cartridge wounds is of particular import, and no other sort of wound produces these conditions so well. This susceptibility of burned tissues probably explains the not uncommon appearance of tetanus in burns, whether of Fourth of July origin or not, a fact somewhat at variance with the general rule that tetanus bacilli will not live in surface wounds exposed to the air.

(d) Other bacteria being present to remove oxygen and to destroy tissue resistance also favor tetanus. Blank cartridge wounds, with their large amount of introduction of extraneous material, practically always cause mixed infection.

THE PREVENTION OF FOURTH OF JULY TETANUS.

Our chief object in this work has been the establishment of a basis for consideration of Fourth of July tetanus from the standpoint of preventive medicine. It is for this reason that we have considered to such an extent the question of the source of the infecting tetanus bacilli that cause the disease. We confess that at first it seemed to us that the bacilli *must* be present in blank cartridges, and had that been the case the prevention would have been a simple matter.

In the absence of any positive demonstration of their presence in the cartridge, the other facts that have been recounted concerning these particular wounds seem sufficient to explain their peculiar danger. It is, therefore, evident that we can not secure safety by some modification in the method of manufacture, a thing the manufacturers would be willing to attend to promptly to escape responsibility. The only way to prevent Fourth of July tetanus that can be successful must prevent the use of blank cartridges altogether. The ideal way would be to attack the source of the evil, by prevention of manufacture and importation into the country of blank cartridges. We know of no essential purpose that blank cartridges serve—their occasional use in melodrama and in starting foot races could easily be accommodated in some way not calling for an annual sacrifice of several hundred lives. Presumably, this would be distasteful to the manufacturers, and it is impossible to say in advance what their attitude would be if they were brought face to face with the proposition that they are the sole cause of the unnecessary death of over 400 boys in the United States every year. It would be pleasing to believe that sound business men, such as we know them to be, would be willing to forego a certain amount of income, donating this, if you please, to the cause of public safety. Might it not be well for the American Medical Association to present this proposition in all its significance to the manufacturers? What the possibilities are for legislation in this direction we are unable to say. Might not this matter of the prevention of Fourth of July tetanus be a proper theme for action by the Association at the next annual session?

As for the manufacture of toy pistols, much the same things are to be said. These flimsy contraptions serve no good purpose, and outside of their relation to tetanus there is one particularly bad feature, namely, their tendency to cultivate in young boys the habit of carrying pistols. "The hip pocket arsenal" is one of our great American vices, responsible for many unnecessary homicides and accidents, and it is not imaginative to consider that putting blank cartridge pistols in the hands of boys is a contributing factor to its prevalence and perpetuation. However important the toy pistol itself may be in causing tetanus, it is secondary to the blank cartridge, for many accidents result from ordinary revolvers, and, of course, the cessation of the production of the cartridges carries with it the end of the toy pistol.

Lacking any immediate means of terminating the production of blank cartridges, and while hoping for its speedy accomplishment, we have another tried and proven method of checking these accidents by stopping their sale in each individual city or town. The feasibility of legal intervention here has been shown. for most of the larger cities have ordinances covering this matter more or less adequately, although many of them seem to have become lost through disuse. However, they do exist, and where lacking can be readily provided, for they come into the proper province of the city authority. The difficulty lies in the enforcement. For example, in Chicago such an ordinance is well known to exist, occasional prosecutions having been made under it. Almost annually a mayorality proclamation has been made concerning Fourth of July injuries, and the necessity of suppression of the sale of toy pistols and blank cartridges, and the police are ordered to enforce this ordinance. Yet there is no difficulty in procuring blank cartridges and toy-pistols, as we have learned by experiment. This year, when the tetanus deaths began, long after the Fourth had passed, orders were given the storekeepers not to sell toy pistols, and it was found that some dealers were obeying the law. However, there were others who still sold them, with the admonition not to say anything about it, as "the coppers have given us orders we can't sell them." Not until numerous prosecutions have been made can the dealers, chiefly proprietors of small confectionery and notion stores, be frightened into obeying the law. In Philadelphia some attempts have been made in this direction, and the newspapers report that the father of one of the dead boys has brought suit against the man selling the pistol. The inefficiency of municipal authorities is particularly seen in Philadelphia, where a full warning had been given by an epidemic of tetanus after the Decoration Day celebration. Deaths from this celebration were still occurring when the epidemic of the Fourth began. Here, if ever, was the presence of an example and a warning to stir some one to action, but that this action was not forthcoming is evident from the development of perhaps the worst Fourth of July epidemic in the history of the state.

Probably but little can be done by education of the boys themselves. "It isn't Natur'." One writer has remarked that a boy could be shown 200 other boys dying from lockjaw, and that if he were then given a quarter, and the Fourth were coming, he would go out and buy himself a toy pistol and a box of cartridges. This may be exaggeration, but not for all boys. However, there are some who can be reached by instruction, and some sound advice given by their teacher just as school is closing for summer before the Fourth, might save some lives at least.

Education of the parents is evidently called for also, to judge from the number of cases in which the information was given that "the boy's mother dressed the wound herself, thinking it of no consequence." They will probably be reached best through the daily papers, and we wish again to express appreciation of the efforts that the press, almost as a whole, has made. Some papers have conducted a long campaign with an evident sincerity of purpose that is pleasing in contrast to the attitude that has occasionally been taken in relation to some matters of preventive medicine. One great obstacle lies in the fact that a very large part of the cases occur among the children of the illiterate, which also indicates the value of parental control among the better classes. So long as blank cartridges continue to be sold to children, however, education of parents to do their best to prevent their use, and to secure proper treatment of the wounds they may produce, must be continued.

And, lastly, there is room for improvement in the way in which many physicians care for blank cartridge wounds that come to them. There, unfortunately, exist physicians who do not keep informed on either medical or popular progress, and to whom a blank cartridge wound is a blank cartridge wound, and nothing more. At least there have been many physicians who have seen such wounds shortly after they have been received, who have been content with simply dressing the wound, often without even an attempt to remove the wads and other foreign matter contained therein. And often these physicians have occupied positions in hospitals and dispensaries that would seem to indicate their possession of more than average information. With the excellent knowledge that we possess of the bacillus of tetanus and the widespread familiarity with the danger of blank cartridge wounds, such inefficient treatment is censurable. Bain has well demonstrated the efficiency of thorough surgical technic in preventing tetanus by his report of a case of blank cartridge wound so treated, in the secretions of which tetanus bacilli were demonstrated, and yet tetanus did not occur. Prophylactic use of antitoxin is also to be urged where it is available. Veterinarians have accumulated ample evidence of its efficiency as a prophylactic, which is in marked contrast to its slight power as a curative agent. In man there is also plenty of evidence that it is equally effective, and altogether without harm. It has been used by Taylor for prophylaxis in blank cartridge wounds with complete success. He has used it in many cases, always without harmful results, and with no tetanus, although in other cases where antitoxin was not used tetanus has followed. His method has been to follow thorough surgical cleansing with injection of 5 to 10 c.c. of antitoxin, repeated in a few days if the wound does badly.

A great help in any future efforts to stop this annual epidemic will be the collection of complete data of all the cases, in a more official and complete manner than it has been done in this paper. This must be the work of either municipal or state boards of health. Such an inquiry has already been started by the Michigan State Board of Health, and it is to be hoped that other states will also take up the matter. There is also need for further study of blank cartridges, since their freedom from tetanus bacilli is still undetermined.

B. DEATHS AND INJURIES ASIDE FROM TETANUS.

Above have been discussed the cases of tetanus incident to the Fourth of July celebration, but the injuries most apparent to the public are those which occur during the celebration. Aside from tetanus in the celebration of the Fourth of July this year 60 deaths were caused, 10 persons made blind, 75 persons lost one eye, 54 lost hands, arms or legs, 174 lost one or more fingers and 3,670 received other injuries, making a total of 3,983 persons injured. Adding the deaths from tetanus and from other causes, 4,449 persons are dead or injured. These facts are embodied in Table 4.

This appalling summary is not given as an item of sensational news, but to arouse efforts in the line of prevention. The table speaks for itself, and deductions from it are easily made by anyone. It will, however, add to the value of the table to note the following facts:

TABLE 4.—SUMMARY BY STATES OF JULY FOURTH CASUALTIES.

State.	Deaths			Injuries.						Total Persons Dead or Injured.	Causes of Tetanus Cases.		Causes of All Cases Aside from Tetanus Cases.				
	From Tetanus.	From Other Causes.	Total.	Loss of Sight.	Loss of One Eye.	Loss of Legs, Arms or Hands.	Loss of Fingers, One or More.	Other Injuries.	Total Non-fatal Injuries.		Blank Cartridge.	All Other Causes.	Blank Cartridge.	Fire Crackers.	Cannon.	Gunshot.	Powder and Fireworks.
Alabama	....	....	....	....	....	....	....	2	2	2	....	....	....	....	....	....	2
Arizona	....	....	....	....	....	....	....	1	1	1	....	....	....	....	....	....	1
California	2	1	3	....	....	3	5	89	97	100	2	....	36	20	16	1	20
Colorado	4	....	4	....	1	....	....	34	35	39	3	1	17	7	2	....	8
Connecticut	3	2	5	....	2	2	2	151	157	162	3	....	69	38	30	1	18
Delaware	....	....	....	....	....	....	1	1	1	1	....	....	....	1	....	1	....
District of Columbia	1	....	1	....	....	....	....	1	1	2	....	1	....	....	....	....	1
Florida	....	....	....	....	....	....	....	1	1	1	....	....	....	1	....	....	....
Idaho	1	....	1	....	....	....	2	1	3	4	1	....	....	3	....	....	....
Illinois	49	10	59	1	14	7	17	268	307	366	43	6	83	117	37	16	53
Indian Territory	1	....	1	....	....	....	....	....	....	1	1	....	....	....	....	....	....
Indiana	11	3	14	1	4	3	11	127	146	160	11	....	54	54	15	4	22
Iowa	14	2	10	....	3	4	5	139	152	168	12	2	52	46	19	6	32
Kansas	11	2	13	....	1	....	2	47	50	63	10	1	30	13	1	2	5
Kentucky	4	....	4	....	....	....	2	24	26	30	4	....	10	5	5	....	6
Maine	2	1	3	....	1	1	3	23	28	31	2	....	11	13	2	....	3
Maryland	1	....	1	1	1	....	....	18	20	21	....	....	3	12	2	....	3
Massachusetts	16	1	17	1	7	6	18	588	620	637	14	1	234	187	46	17	132
Michigan	28	3	31	....	2	2	7	102	113	144	24	1	38	42	12	3	18
Minnesota	14	1	15	....	2	2	10	128	142	157	14	....	52	44	22	6	23
Missouri	27	2	29	1	5	....	1	111	118	147	23	....	69	16	7	6	13
Montana	2	1	3	....	....	....	....	2	2	5	2	....	1	1	....	....	1
Nebraska	4	....	4	....	....	....	....	42	42	46	3	....	12	10	3	4	9
New Hampshire	2	....	2	....	....	....	2	33	35	37	1	....	6	17	4	3	5
New Jersey	8	....	10	....	2	2	8	206	218	228	6	2	43	41	22	32	55
New York	33	8	41	2	9	4	29	437	481	522	29	3	155	149	49	40	66
North Dakota	....	....	....	....	....	1	1	8	10	10	....	....	1	2	3	....	4
Ohio	66	11	77	....	11	8	25	322	366	443	63	2	125	97	39	31	67
Oregon	2	1	3	....	....	1	....	12	13	16	2	....	7	3	1	2	1
Pennsylvania	80	6	86	3	9	7	16	412	447	533	74	5	128	83	36	46	78
Rhode Island	3	1	4	....	....	....	2	58	60	64	2	1	19	22	4	1	10
South Dakota	....	....	....	....	....	....	....	4	4	4	....	....	....	....	....	....	3
Tennessee	....	....	....	....	....	....	....	4	4	4	....	....	....	1	....	1	2
Texas	....	....	....	....	....	....	....	2	2	2	....	....	1	1	....	....	....
Utah	....	....	....	....	1	....	1	21	23	23	....	....	7	10	....	1	6
Vermont	3	....	3	....	....	1	1	40	42	45	3	....	6	16	4	3	12
Washington	2	2	4	....	....	....	....	17	17	21	1	1	1	7	2	1	2
West Virginia	3	....	3	....	....	....	....	16	16	19	3	....	6	7	2	....	1
Wisconsin	10	....	10	....	....	....	3	177	180	190	7	2	33	65	12	8	49
Wyoming	....	....	....	....	....	....	....	1	1	1	....	....	....	1	....	....	....
Total	406	60	466	10	75	54	174	3670	3983	4449	363	29	1309	1152	397	236	731

SOURCE AND RELIABILITY OF STATISTICS.

A detailed list has been compiled of the 4,449 persons dead or injured, giving the name or description of each, the nature of the injury and the cause. These are classified under cities and states, and from this list Table 4 has been prepared. The facts were furnished by the newspapers from the various sections of the United States. Only such cases have been listed as presented names and data, or, in the absence of the name, a case has been included when it bore such marks of identification that it could be distinguished from other cases in the same city. All doubtful cases have been omitted.

Concerning the number of injuries here reported, it is safe to say that not two-thirds, perhaps only one-half, of those occurring in the United States are here presented. In evidence of this fact, it is worthy of note that the large city of Washington, D. C., is represented by but one case. The newspapers of Philadelphia stated that 500 people were injured in that city in the Fourth of July celebration, and that 380 received hospital treatment; in comparison with this accounts of only 151 were received. In another city the newspapers stated that there were 90 persons injured; the table contains 10. Further, it is evident that the absence of statistics in certain states can not be explained on the ground that accidents did not occur.

This table contains only deaths and injuries directly due to explosives of one kind or another. For example, we have not included several deaths which occurred from fright and from heart disease, nor several deaths occurring in runaways caused by firecrackers. Another death not included is that of a butcher who committed suicide to escape the noise and turmoil incident to the day. Other injuries not included may be illustrated by the following: In the endeavor to escape from firecrackers, cannon, etc., after they had been lighted, several people sustained fractured bones and other severe injuries; one man was killed by a train while putting a torpedo on the track, and a boy while shooting firecrackers on a roof fell five stories and broke his leg.

Because of the paucity of newspaper accounts in certain communities, it may easily have occurred that some of the injuries here cited eventuated in death, blindness or loss of members, inasmuch as the accounts have stated that "the injuries may prove fatal," or "the physicians give little hope of saving the boy's sight."

In the tabulation of injuries, where one person lost an eye and a finger, for example, he was counted in but one column; therefore, the total number of persons who lost fingers exceeds the total at the foot of the table.

Under the heading of "other injuries," it is worthy of note that the following are included: Fracture of the skull, of the leg, of the arm, etc.; loss of hearing, loss of patella, loss of nose, loss of ear, penetrating wounds of lung, brain, abdomen, etc. The majority of injuries, however, were wounds and burns of the face, eyes and hands. All accidents are included that were incapacitating or that required medical attention.

It may occur to someone that perhaps some of the minor injuries recorded in Table 4 later developed into tetanus infection and resulted in death. This is the case. A careful comparison, however, of the cases in the tetanus list with those in the list of injured shows that comparatively few of the former appear in the latter. For this reason and because the list of injured is grossly incomplete, the fact that some few persons are really counted twice in the total number of persons dead or injured is not very important. The reasons for the absence of certain tetanus cases in the list of injured are two: The list of injured is incomplete, and—a very instructive point—the tetanus cases were, in many instances, caused by wounds too trivial to be reported or to be included in the list.

DEATH AND INJURY ABROAD.

These statistics are concerning the United States. Although the national holiday is celebrated in other lands by some few persons, only the following cases of death or injury have been reported: In Ceylon, a British gunner was killed and another was injured by a cannon while firing a salute in honor of the United States. In Canada a boy was injured by a firecracker.

THE CAUSE OF INJURY.

Specification of the causes of tetanus shows that 363 cases were due to the blank cartridge or toy pistol, while all other causes together were responsible for a total of only 29 cases. In comparison with this, the causes of other injuries are divided more evenly between the blank cartridge, the firecracker and the other uses of powder. To make it exact, the blank cartridge caused about 33 per cent. of the non-tetanus injuries, but caused over 92 per cent. of the cases of tetanus.

In other words, the danger of accident in the use of the blank cartridge may not be much greater than from the use of other means of celebration, but the danger of tetanus is shown to be extraordinarily greater when the blank cartridge is used. To make the statistics of more value, it would be interesting, if the facts were available, to know what proportion of those engaged in celebrating do so with the toy pistol, how many with firecrackers, how many with cannon, etc. The injuries from firecrackers are largely from the large variety, from their accidental and unexpected explosion, and especially from the carelessness of persons who held them in their hands while they went off. Many crackers are loaded with dynamite, and persons fail to realize the power hidden in them. Gunshot injuries (bullet wounds) are notably in excess in the cities, because of the number of persons in the cities who carry weapons. The injuries from toy cannons, powder burns and fireworks (for evening display) may be taken as such as have occurred for many years. The increase in injuries of late years may be assigned to the great increase in use of the cannon-cracker and the blank cartridge. These were deadly additions to the boy's armament, and they together caused 2,461 of the 3,825 injuries for which causes were assigned, or over 64 per cent.

In explanation of the column headed "powder and fireworks," it may be said that this includes all the causes not in the other columns. To summarize: Nearly one-half of these injuries were caused by the use of powder, about one-third by fireworks (for evening display), and the remainder of cases in this column were from miscellaneous causes, such as torpedoes, paper caps, chemicals, matches, etc.

The first column of causes, that of blank cartridges, includes blank cartridges and toy pistols, also a very few cases of injury from the use of the cartridge cane. These latter cases are included in this column because they use the blank cartridge or small metal dynamite caps, and the explosion and the injury are almost identical with those caused by the discharge in the toy pistol.

Since the cause was not stated or was ambiguous in the accounts of many accidents, the total number of cases under the heading of causes is less than the number of persons dead and injured.

The causes were plainly stated for 58 of the 60 violent deaths and are as follows: Blank cartridges, 11; firecrackers, 14; cannon, 14; gunshot wounds, 9; powder burns or explosions, 4; fireworks, 3; torpedo, 1; caps, 1; matches, 1. A number of these fatal wounds and many injuries were received by innocent passersby.

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THE FOURTH OF JULY CELEBRATION.

The Fourth of July, with its casualties, has come and gone, and we can now count up the cost. Elsewhere in this issue we give a summary of the accidents, so far as reported to us, and a special analysis of the tetanus cases. The truly formidable showing made is well worthy of serious contemplation. We like to consider ourselves a smart people, but there are some facts that are troublesome to this conceit, and the present method of celebrating the nativity of our national independence is one of them. True patriotism is an excellent thing, but no one serves his country by making his nation's birthday a day of peril to life, limb and property. It would be a rash calculation that would estimate that even 50 per cent. of those celebrating the Fourth have any real spirit of patriotism in the act. All that is wanted by them is to make a noise and indulge in a license not allowed on other days. An English writer whose works used to be very popular with boys says, in effect, in one of them that he can gauge the decadence of a people by the amount they spend for fireworks. While we would not exactly endorse his utterance, we certainly consider such expenditures as we have each Fourth as very far from being an index of national intelligence. It is, in fact, a blot on our record. It would be better to abolish the Fourth of July as a holiday, and to keep it only as a glorious tradition, sadly dimmed by recent experience of its celebrations, than to continue the annual sacrifices we now make to its memory.

Two facts stand out in the consideration of the annual holocaust—one is that there was no lack of warning or even of legal prohibition in some sections from which the worst experiences are reported. In Pennsylvania, the state which records the greatest number of toy pistol tetanus deaths, the sale of toy pistols to boys under 16 seems to have been illegal and prosecution of dealers is being urged by the State Board of Health. Lawbreaking followed by homicide, for this is nothing else, is a pretty serious matter, as some of these unscrupulous commercialists may find it. The other fact is that the victims of this annual tragedy are mostly immature boys whose discretion is always questionable and who should be protected by law, if not by parental control, from just such possibilities. It is a massacre of the innocents often in one, and sometimes in the other, sense of the word. "Butchered to make a Roman holiday" is a favorite old quotation that may yet come to need a modern adaptation.

We trust that our readers will utilize the statistics we present this week as an argument for more active repression of the lawlessness which accompanies the annual celebration of our national independence. Warnings have not been brilliantly successful in the past; but by persistent and frequent repetitions they may accomplish something each year, until finally the annual sacrifice is done away with. Four hundred and sixty-six lives sacrificed, 10 persons made totally blind, 95 eyes lost, beside 500 other persons maimed and disfigured for life, is a record that calls loudly for justification, and, finding none, demands termination.

Reprints of the matter, with the tables, will be supplied in any quantity at a nominal price, and should be ordered at once. These may be useful to distribute among those whose duty it is to prevent the dangerous methods of celebrating, viz.: city aldermen, mayors, etc., etc. Any corrections, additions or suggestions as to this matter should be sent at once.

THE PREVENTION AND TREATMENT OF FOURTH OF JULY TETANUS.

We now turn to the chief factor in the mortality—tetanus. With over four hundred deaths from lockjaw as a result of the demonstration of a single Fourth of July—more than the entire loss of life from wounds in a good-sized modern battle—surely it is time for something to be done, for there is no evidence that this year's mortality is any greater than that of other years. The astounding total of 415 cases of Fourth of July tetanus, however, is probably below the actual number, for we have every reason to believe that many more cases have been omitted from our statistics than have been erroneously included. That the total is astounding is probably because this represents the first attempt, with which we are acquainted, to collect the accidents of the entire country into one group. That such a summing up of the fearful results of a Chinese celebration of an American holiday may stir up enough feeling in the proper places to lead to some action toward its termination is our motive and hope in undertaking this work.

There are several parties involved in the crime. First, there are the municipal authorities who have before them laws directed toward controlling the dangerous forms of celebration, which they make inefficient or make no efforts to enforce. Secondly, there are the dealers in toy pistols, who, for the sake of a very trivial income, violate the laws that exist in most cities against the sale of firearms to minors. These two must be considered the primary culprits, for they are acting in violation of laws that have been made for the express purpose of preventing this very unnecessary mortality. Manufacturers of blank cartridges and toy pistols are simply complying with a popular demand, and are not culpable in the same degree as they are violating no laws, although they must appreciate the fact that they hold in their hands the essential means of continuing or ceasing the trouble. As for the parents of the boys, they are usually either ignorant of the actions of the boy, or of the danger of his pastime, and they are often completely unaware of the danger of the blank cartridge wounds.

After going through the reports of all these four hundred cases, and reading all procurable lay press comments and explanations, it seems to us that the only method that offers much hope of success must be directed at the primary seat of the trouble, the blank cartridge itself. Arraignment of municipal authorities and prosecution of dealers in toy pistols and blank cartridges can have but local effects, and the trouble is universal. Our figures show that the blank cartridge is responsible for such a very large proportion of all the cases, over 90 per cent., that control of this danger will leave the rest a relatively simple matter. But how are the blank cartridges and toy pistols to be removed from the Fourth of July program? There are, so far as we can learn, but four manufacturers of blank cartridges in the United States and one in Canada. Whether they can be prevented from manufacturing or importing the perfectly useless blank cartridge or not is a matter to be determined by the proper legislative body. If this can be accomplished we shall be rid of the greatest danger, if not the greatest nuisance of the Fourth. If national intervention is impracticable it is certain that state legislatures can prohibit the sale of blank cartridges and toy pistols within their boundaries—it certainly is as proper a subject for legislation as the cigarette, and there probably would not be as great opposition by commercial interests. Some of the state boards of health are already taking up a study of Fourth of July tetanus, and the results obtained will be valuable, especially as material for directing legislative action.

Until the sale of blank cartridges has been stopped there is much to be done in the way of popular and professional education. Parents must be taught that toy pistols are to be kept out of the hands of children. The fact that a large proportion of the cases of tetanus have occurred in the children of the poorly educated is an indication that parental control is not without effect. They are also to be taught that every Fourth of July wound possesses great possibilities of causing lockjaw, and requires skilful medical care. This instruction they will receive chiefly from the daily papers, but in smaller communities much can be done by the physician. The need of some means for popular information in preventive medicine is illustrated again in this case. And in turn it is to be expected that the family physician will appreciate the gravity of the situation when a boy is brought before him with a blank cartridge wound, no matter how trivial that wound may seem to be. Not only does it demand thorough surgical cleansing, but also prophylactic injection of antitoxin. Fortunately, the incubation of tetanus is so long that unless the case occurs in some unusually isolated community, antitoxin can be procured before the disease has manifested itself, for then, in most cases, serum treatment is of no avail.

It is evident that the treatment of tetanus must be prophylactic, for the returns from these cases of the Fourth show how little has been accomplished in the direction of cure. But a very small percentage of recoveries, apparently under 5 per cent., has occurred, in spite of quite general use of antitoxin. It has been well said that the patient who is just showing tetanic symptoms is not beginning to have tetanus—he is beginning to die from it. The spasms of tetanus are practically the death agonies of an infection that has existed several days before their onset, and experience has shown that tetanus antitoxin is then of but little value. We may look to Fourth of July tetanus to furnish us with much information concerning the treatment of the disease, since these cases constitute such a large and concentrated part of our experience, but so far the results have only served to emphasize the importance of prophylaxis and the futility of curative measures. Surgeons who have carefully cleansed and drained blank cartridge and fire cracker wounds have had few cases of tetanus; surgeons who have also given antitoxin while the wound was fresh have had none.

Perhaps the most promising suggestion in the way of curative treatment is that of Luckett,[1] who has reported two recoveries, and informs us of two more yet unpublished. This is the intraspinal method of antitoxin administration, which has already been used somewhat in Europe. It is much less dangerous than the intracranial method, and seems much more logical. The chief manifestations of tetanus come from the injury of the anterior horn cells of the cord—not from the cerebral cortex where the antitoxin is introduced in the intracranial method. There is much reason for believing that the toxin reaches the cord along the nerve sheaths from the point of injury, rather than by the blood, and it has been shown that the cerebrospinal fluid is more toxic than the blood serum in tetanus. Therefore, intraspinal injection permits of application of the antitoxin where it would seem to be of greatest value, and it also gives an opportunity for letting escape as much as possible of the highly toxic cerebrospinal fluid through the needle, before injecting the antitoxin. On this last point Luckett lays much stress, and it would seem theoretically to be an important factor. At any rate, the brief use of this method has given such excellent results, and it is based on such sound principles, that it should be given widespread trial.

RECENT WORK ON CELL POISON OF ANIMAL ORIGIN.

Few available tissues of the body remain for which some one has not produced, or attempted to produce, a specific cytotoxin by immunization. Théohari and Babès have the latest cytotoxin—a gastrotoxin, produced by injecting the mucous membrane of the cardiac end of the stomach of dogs into goats. A part of their method is unusual, in that they suspended the emulsion of tissue in 1 per cent. salicylic acid solution, instead of the normal salt solution which is ordinarily used. The reason for this is not stated, but probably it was to combat the bacteria which no doubt were present in the mucous membrane. Three to four injections of the emulsions, given at intervals of ten to fifteen days, gave a fairly toxic serum, of which 15 to 60 c.c. were injected into the jugular veins of dogs. By way of control, it was found that 60 c.c. of normal goat serum injected similarly produced no symptoms in dogs. Injections of small amounts of the toxic serum (15 c.c.) caused vomiting and hemorrhage into the intestines, some of the animals recovering and others dying. Larger amounts of a strong serum (60 c.c.) caused death in ten to twenty minutes. Necropsies showed lesions limited to the cardiac portion of the stomach and the small intestine. These portions were congested and blood was present in the bowel. Histologically, the peptic glands showed a condition of the cells seen in hypersecretion, particularly after large doses of the serum had been given. Many of the chief cells and lateral cells had lost their granulations and the former are stated no longer to have contained pepsin. The cytoplasm of many cells was uniformly cloudy. In Lieberkühn's glands the cells were often cloudy, and the capillaries underlying the affected surfaces were widely dilated. They concluded that the chief degenerative changes were in the lateral cells. The authors are unable to explain that the small intestine and cardiac end of the stomach should be attacked while the pyloric portion and the large intestine were uninvolved.

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[1] Medical News, April 18, 1903.

This work is interesting, and there probably is no reason why the cells of the gastric mucous membrane should not yield a cytolysin as well as other cells. But so far as one can judge from the article mentioned, the work of Théohari and Babès is too incomplete to justify all the conclusions they have drawn. What most arouses suspicion is that they apparently assign the rapid death in some of their animals to the toxic effect of their serum on the mucosa of the stomach, omitting examination (or at least mention) of the conditions in more vital organs. If the action of the immune serum was selective and specific for the epithelium of the stomach and intestines, it is difficult to see how the slight injury to these structures recorded could produce death in fifteen minutes. There is, indeed, sufficient evidence in their report that the serum was not absolutely specific for the cells of the gastric mucosa. The hemorrhages into the bowel probably could not have been caused by any amount of lysis of the epithelial cells. It has been shown by various investigators that hemorrhages may be caused by many toxins, the result apparently of a solvent action on the endothelial cells of the capillaries by special substances — endotheliolysins, Flexner's "hemorrhagin." It is also not excluded in their work that hemolysin and hemagglutinin were not produced by the immunization. In addition, it may be stated that intravenous injections of other cytolytic sera are able to cause vomiting, and bloody stools and urine. It is not improbable that careful examination of other organs in these experiments would have shown pulmonary or cardiac conditions sufficient to explain the sudden death of some of the animals. Workers with immune cytotoxic sera have noted that a fatal pulmonary edema may occur in a few minutes following the intravenous injection of a large amount of a toxic serum. The exact cause of this edema remains unexplained as yet, but it seems probable that it is due to endotheliolytic effects or embolism of agglutinated red blood corpuscles. The study which Kraus and Sternberg made of the tissues of animals killed by injections of immune hemolytic serum, indicate that other cells than those for which the serum is supposed to be specific, may be injured. They frequently found focal necrosis in the liver and cloudy swelling of the kidneys in their animals. On the whole, recent works of immune cytolysins seem to show that attempts at immunization with one type of cell may yield a serum, which is toxic not only for this cell, but for others also—polytropic, rather than monotropic in its action. That is to say, in terms of the side-chain theory, that particular cell, besides having receptors peculiar to itself, also has some which may be found in other cells. Hence, in immunization, antibodies would be produced for more than one kind of cell. Hence the efforts to produce absolutely specific, cytotoxic antiserum may be quite hopeless, even in cases where it is possible to secure for injection cells of one kind only.

Similar results are noted in immunization with bacteria; for example, immunization with the typhoid bacillus yields a serum which, in addition to agglutinating in high dilutions the typhoid bacillus, will also agglutinate the colon bacillus in higher dilutions than the normal serum. To know that this lack of specificity does exist at any rate makes clear how certain bacterial poisons which have a high affinity for certain tissues are able at the same time to injure other tissues, as in diphtheria for instance.

THE AMEBA OF DYSENTERY.

Now that the study of the pathogenic protozoa has become the order of the day, it is reassuring to find that observers trained along zoologic lines are directing more and more attention to the study of these microörganisms. An interesting example of the progress that can be hoped for from studies of this character appears in the recent work of Schaudinn[1] on the life history of certain ameboid organisms. Schaudinn calls attention to the fact that the group of so-called amebæ is by no means zoologically well-defined, and that it doubtless contains organisms of most heterogeneous character with widely diverse life histories and uncertain zoologic affinities. In the course of studies that have extended over a period of eight years on the parasitic rhizopods of the human alimentary tract, Schaudinn has made the important discovery that the ameba present in healthy individuals possesses a developmental history radically different from that of the ameba found in dysentery, and that, therefore, on purely zoologic grounds, the two organisms must be regarded as quite distinct. For plausible reasons the former organism is newly designated by Schaudinn as *Entamœba coli,* and the ameba of dysentery, by a similar change of nomenclature, is called *Entamœba histolytica.*

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[1] Arb. a. d. k. Ges., 1903, xix, Heft 3, p. 547.

The ameba of the normal intestine multiplies both by simple division and by a process that used to be termed spore-formation, but that zoologists now denominate schizogony. The latter phenomenon is preceded in *Entamœba coli* by remarkable nuclear changes. In brief, these consist of ordinary reduction divisions, after which a conjugation takes place between two daughter nuclei that have arisen from the same mother nucleus. Mitotic division then proceeds and the protoplasm of the cyst comes eventually to contain 8 nuclei; finally a division of the protoplasm takes place and 8 small amebæ are formed. A close analogy to this singular process has been observed by Hertwig in *Actinosphœrium,* where a similar conjugation occurs between two daughter nuclei derived from the same mother nucleus.

The process of reproduction of *Entamœba histolytica* follows a different course. Nuclear division of a regular character is entirely absent or at least has not been observed. Instead, a kind of fragmentation of the chromatin takes place, the remnant of the nucleus itself being expelled from the cyst. Small spherical bodies, 3 to 7 microns in diameter, are formed in the cyst, each of these presumably containing some of the finely fragmented chromatin. Schaudinn showed experimentally that these spores of *E. histolytica* were capable of causing serious intestinal symptoms and lesions when fed to cats. In addition to the great difference between the two species of *Entamœba* in their method of reproduction, an important morphologic difference, already dwelt on by Jürgens,[2] is reaffirmed by Schaudinn. This is the stiff hyaline structure exhibited by the ectoplasm of *E. histolytica.* In this species the outer zone of the protoplasm is always sharply delimited from the inner, and it is apparently the possession of this firmer layer that enables the dysentery ameba to thrust its way into the tissues.

The differentiation of the ameba found in dysentery from the form so commonly present in healthy individuals has heretofore proved a matter of some perplexity, and the apparent identity of the two forms in their ordinary phase has in the past given rise to confusion and misunderstanding. Schaudinn's researches will certainly be welcomed by pathologists as tending to establish the complete zoologic independence of the two species. More confidence than hitherto will be felt in attributing to *Entamœba histolytica* a causal rôle for the peculiar dysenteric disease with which it is associated.

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[2] Veröffentl. a. d. Geb. d. Militärsanitätswesens, 1902, xx, p. 110.

LEMON JUICE AND TYPHOID FEVER BACILLI.

At the end of the year 1902 and during the early part of 1903, much was published in the medical and lay press regarding the action of lemon juice on typhoid bacilli. Reports from the laboratory of the public health department of one of our large cities claimed that "a teaspoonful of lemon juice to half a glass of typhoid infected water is sufficient to destroy the vitality of the contained germs and thus to prevent their production of the toxin or poison which causes typhoid fever." From the same source the suggestion was also sent out that oysters infected with typhoid bacilli could be rendered innocuous by pouring lemon juice over them. These ideas were eagerly taken up by the daily papers, and as a result many people entertain the false idea that lemon juice in water and on oysters protects them from danger of typhoid fever when these are swallowed.

As has been shown by subsequent observations, the juice of lemons possesses no such germicidal power, as these statements would indicate. W. Johnson[1] has found that typhoid bacilli are capable of increase after exposure of 24 hours to a 2 per cent. solution of lemon juice, and after 20 minutes to a 9 per cent. solution. His results are entirely opposed to the newspaper statements of disinfection by a 1 per cent. solution in an hour or less. W. D. Greene,[2] health commissioner of Buffalo, has just published the results of a series of experiments by the city bacteriologist. They were undertaken to determine the germicidal property, if any, of the mixture known as lemonade. The experiments emphasize the necessity of discriminating between simple inhibition and destruction in all tests of germicidal agents. Typhoid bacilli were not killed by exposure of 45 minutes to a mixture of the juice of one-half a large lemon in a glass of water. Greene concludes that lemon juice in the proportion described is not at all to be depended on in rendering polluted water safe for drinking purposes. As to the ability of lemon juice placed on the surface of oysters to destroy typhoid bacilli deep within the body of the oyster we know nothing, but we have every reason to believe that no such result will occur. It was shown nearly 15 years ago by Kitasato that acetic acid in a strength of 0.2 per cent. and citric acid in a strength of 0.43 per cent. would kill typhoid bacilli in 5 hours, and that much weaker dilutions of the acids would inhibit the growth of the bacteria. The results of the tests on which the reports referred to at the beginning of this article were founded had evidently been misinterpreted, and simple inhibition of growth by the lemon juice which was carried over to the nutrient medium mistaken for destruction of the bacteria.

The fate of the lemon as a preventive of typhoid fever again calls attention to the desirability of submitting the results of scientific investigation to medical societies and publications so that they may be substantiated or disproved before they are rushed before the general public. The public, having once learned of an easy way of preventing typhoid fever by simply squeezing lemon juice into water, or on oysters, will not be so ready to return to the more troublesome procedure of boiling water. Thus the results of years of teaching are lost in part at least on the public in a single day. Another unfortunate result of such experiences is that they place the laboratory which makes the mistake in a bad light before the profession, and subsequent reports from the same source are apt to be received with suspicion.

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[1] Northwest Medicine, May, 1903.

[2] Bull. Del. State Board of Health, No. xvi, July, 1903.

THE RURAL LABORATORY.

Last week we called attention to the practical value of blood examination, and its great importance as a means of diagnosis and to the simplicity of its technic.

But valuable as is this method and simple as is the technic, it yet requires not alone a training in bacteriology, but apparatus, media, etc., that must constantly be on hand and ready at all times to be brought into use. In larger cities with their medical colleges, hospitals and municipal laboratories there is comparatively little difficulty in finding the man and the appliances close at hand. But what about the "country doctor" and physicians in small towns? How can they, however much they may desire it, make their early diagnosis of typhoid or of pneumococcus bacteriemia by the blood examination? It is well-nigh impossible for the average physician in the smaller town, or in the city for that matter, even though he may possess the requisite knowledge and technical skill, to keep his private clinical laboratory up to the mark, supplied with fresh culture media and stock control cultures, or to watch and follow through carefully a bacterial growth. He must depend on assistance.

The solution of this difficulty lies in one of several directions. The busy practitioner may attach to himself a competent recent graduate who will have charge of the private clinical laboratory. Or the man who is not too busy may be able to attend to practice and to the laboratory work, too. But it will be a rare man who will do this for a long time. A more practicable plan is for several physicians in a small town, or even in adjoining towns, to unite in supporting a small clinical laboratory that shall be in charge of some suitable man, naturally, a recent graduate, but one with good laboratory and hospital training. He may be paid by salary, or in any other way that is mutually arranged. The apparatus may be his own or belong to the physicians who support the laboratory. These are details that can be settled according to local conditions. This communal rural laboratory, within telephonic call of all physicians for miles around, would be an immense help to the country physician and would have an influence that would be distinctly elevating not only on the medical profession of the neighborhood, but on the public as well. A demonstration of the practical value of applied scientific knowledge would arouse in the people an increased interest in medical matters, create a heightened respect for the physician, and bring about a more intelligent discussion of, and action on, matters of personal and public health.

By all means let us have rural laboratories, either private, communal or under the supervision of local or county medical societies. This work county societies in many places could well take up. There is no reason why the city should have a monopoly in the way of examining sputum, stomach contents or blood. There is every reason why in the smaller towns work of this sort should be done, differing from that done in the city only in quantity.

Medical News.

MARYLAND.

Baltimore.

Cocain Addiction Increasing.—Retail druggists say that the demand for cocain is increasing. One pharmacist, whose store is centrally located, is said to take in from $5 to $10 in 5 and 10 cent sales of cocain every night between 11 and 1 o'clock.

Personal.—Dr. Joshua W. Hering has declined renomination as state comptroller, which he has held for two terms.——Dr. A. C. Poole is in Paris.——Dr. Smith Hollins McKim has moved to New York.——H. Barton Jacobs is at Trouville, France.

Scarlet Fever and Diphtheria Increasing.—During the first seven months of this year there were 327 more cases of scarlet fever and 249 more cases of diphtheria than during the corresponding period of last year. The health department claims that this is due to too early release of sick children from quarantine.

Deaths of the Week.—The deaths for the week ended August 22 were 202, a rate of 18.93 per 1,000 per annum. It is notable that cancer comes second on the list of death causes. The following are the principal causes: Consumption, 28; cancer, 15; diarrhea, pneumonia and Bright's disease, each 11; heart disease, 9. Scarlet fever, typhoid fever and diphtheria are prevalent.

MASSACHUSETTS.

Glanders.—Another case of glanders contracted by the owner from his horse is reported from Methuen. It necessitated the amputation of an arm.

Not Proven.—The charge against Dr. J. M. Jones, Bay City, of failure to report a case of contagious disease to the local board of health was not proven, and the defendant was discharged.

Typhoid from Milk.—An epidemic of typhoid fever at Fall River has been traced to the contamination of milk on one route. Apparently the germs entered the milk when the farmer entirely submerged his cans full of milk in a well.

Personal.—Dr. John W. Crawford, Lawrence, is in the Massachusetts General Hospital, seriously ill from septicemia due to an operation wound.——Dr. Thomas B. Shea, Boston, has gone to Europe.——Dr. John Gallagher has been appointed physician to the House of Providence Hospital, Holyoke, vice Dr. William Powers, resigned.

Lowell Water Impure.—The score and more of typhoid fever cases reported in Lowell, Mass., since August 1, are believed to be due to contamination of the drinking water. The city gets its supply from driven wells, but after a large fire recently a check valve failed to work and river water was for a time permitted to enter the city mains.

MICHIGAN.

Personal.—Dr. Frank C. Myers, Kalamazoo, has moved to Spokane, Wash., on account of the ill health of his wife. He has purchased the practice of Dr. John R. Leadsworth.

The Most Dangerous Communicable Diseases.—Including reports by regular observers and others, meningitis was reported present in Michigan during the month of July, 1903, at 5 places; whooping cough at 40 places; diphtheria at 55 places; typhoid fever at 79 places; smallpox at 81 places; measles at

85 places; scarlet fever at 96 places, and consumption at 216 places. Reports from all sources show meningitis reported present at 2 places more; whooping cough at 3 places less; diphtheria at 13 places less; typhoid fever at 14 places more; smallpox at 26 places less; measles at 28 places less; scarlet fever at 13 places less, and consumption at 8 places more, in the month of July, 1903, than in the preceding month.

July Mortality of Michigan.—There were 2,653 deaths reported for July, or 334 more than during the preceding month. The death-rate for July was 12.6 per 1,000 per annum. There were 566 deaths of infants under 1 year, 197 deaths of children from 1 to 4 years, and 711 deaths of persons aged 65 years and over. Important causes of death were as follows: Tuberculosis, 206; typhoid fever, 27; diphtheria, 37; scarlet fever, 13; measles, 12; whooping cough, 38; pneumonia, 82; diarrhea and enteritis, under 2 years, 271; cancer, 138; accidents and violence, 274, including 58 deaths from drowning and 11 deaths from lightning. There were 2 deaths reported from smallpox during the month, and 27 deaths from lockjaw, nearly all of which were due to Fourth of July accidents, caused by the use of toy pistols.

Comparative Prevalence of Disease.—For July, 1903, compared with the preceding month, diarrhea, cholera morbus, intermittent fever, whooping cough, dysentery, cholera infantum and inflammation of brain were more prevalent; and influenza, measles, scarlet fever, pneumonia and meningitis less prevalent. For the same month, compared with the average for July in the ten years, 1893-1902, tonsillitis, scarlet fever, smallpox, diphtheria and inflammation of brain were more than usually prevalent; and neuralgia, diarrhea, consumption, influenza, cholera morbus, intermittent fever, dysentery, remittent fever, inflammation of bowels, cholera infantum, erysipelas and meningitis were less than usually prevalent. Diarrhea, dysentery, cholera infantum and cholera morbus are usually most prevalent during July, August, September and October, but these diseases were from twenty to fifty-seven per cent. less prevalent than usual in the July just passed.

MINNESOTA.

Change of Name.—The Minnesota State Medical Society has filed papers changing its name to Minnesota State Medical Association.

Fire in Medical College.—Damage amounting to about $5,000 was caused by a fire in the basement of the medical department at the state university.

Ames Asks Aid.—Former Mayor Dr. Albert A. Ames, Minneapolis, now under sentence of imprisonment for bribery, has made application for pension on account of injuries received during the Civil War.

Correction.—Dr. Robert F. Lynch, Monticello, writes asking that the error whereby his name appeared in the report of the organization of the Wright County Medical Society as "Albert F." Lynch be corrected. The Journal printed the name as "Albert F." because it is so given in Polk's Directory, which is, as a rule, correct.

Personal.—Dr. Charles A. Lapierre, Minneapolis, has been seriously ill from an infected wound of the hand.——Dr. John B. Dunn, St. Cloud, has gone to Europe.——Dr. George A. Stevenson, Albert Lea, has returned from a prolonged tour of Europe.——Dr. Charles H. Norred, Minneapolis, has been appointed surgeon to the Minnesota Soldiers' Home.

NEW JERSEY.

Smallpox in Bridgeton.—Smallpox has again appeared in Bridgeton. The treasury is empty and the city council has refused to give the board of health any more money.

Inspect Trenton Dairies.—The Board of Health of Trenton, acting in conjunction with the State Board of Health, has ordered an inspection of all the dairies of the Trenton milkmen.

Attachment Issued on Hospital.—The real and personal property of the Elizabeth General Hospital has been attached for a long-standing debt of $4,393. The hospital is valued at $100,000. Ex-Governor Foster M. Voorhees is president of the institution.

Enforcement of Child Labor Law.—Chief State Factory Inspector Wood has instructed his deputies strictly to enforce the new child labor law, which goes into effect September 13. The new law makes the employment of children under 14 a misdemeanor, punishable by a fine of $200 or imprisonment for one year.

Anthrax.—A serious epidemic of anthrax among cattle is reported in the vicinity of Lower Alloway. Thirty head were buried on Round Island in one day. The law requires their burial six feet below the surface and the use of a layer of lime. The inoculating process is used on cattle as a preventive measure. The board of health enjoins the citizens to observe the law concerning contagious diseases of cattle.

NEW YORK.

Arrests Incubator Proprietor.—An overzealous member of the New York Society for the Prevention of Cruelty to Children caused the arrest of Dr. Martin A. Cooney, proprietor of the infant incubator at Luna Park, Coney Island, for running a baby farm.

Needs Endowment.—Albany Medical College has appealed to its alumni to provide an endowment fund producing at least $5,000 a year for each department, to solve the problem of supporting the laboratories, which has become a question of paramount importance.

Personal.—Dr. Abram T. Kerr, secretary of the Cornell medical faculty, Ithaca, has been appointed health officer of Ithaca, vice Dr. Edward Hitchcock, Jr., on leave of absence.——Dr. Carl W. Walser, has been appointed assistant house physician at the Presbyterian Hospital, Manhattan.

Addition to Medical Library.—The medical library in Stimson Hall, Cornell University, Ithaca, has just received an addition in the form of the medical library of the late Dr. Charles E. Van Cleef, a graduate of Cornell, who died in 1896. This gift consists of about 250 volumes of standard medical works.

Buffalo.

Personal.—Dr. Frederick Preiss has returned after an extended tour of Europe.

Disposal of Garbage.—Commissioner Ward has signed the contract with the Buffalo Sanitary Company for collecting and disposing of the city garbage. Work will be begun September 1. The city will pay about $170,000 a year.

Currents and Water Contamination.—A dozen new floats of an improved order have been placed in the lake near Stony Point by the Health Department for the purpose of studying the effects of currents on water contamination. Mr. Fuller, the water expert from New York, is continuing his research experiments on the water supply of Buffalo.

Emergency Hospital Report.—The first annual report of the Emergency Hospital of the Sisters of Charity shows that during the year the number of patients admitted to the hospital was 1,190; of that number 1,038 were discharged and 100 died. The number of patients who were treated without fee was 330, those who paid partially were 630, and those who settled in full were 235. The total number of cases treated in the dispensary was 2,479 and the total number of old cases treated in the dispensary was 9,688. The total number of consultations was 12,167.

New York City.

Cabot Resigns.—Dr. Follen Cabot, Jr., assistant bacteriologist of the Department of Health, in charge of rabies research, resigned, August 12.

New York Eye and Ear Infirmary.—By the generosity of the late William C. Schermerhorn an ophthalmic ward was added to the hospital, and now his daughters have provided for the furnishing and surgical equipment of this portion of the hospital.

Inspectors Under Fire.—Out of ten medical inspectors of Brooklyn against whom charges were preferred, eight were found guilty. Three of these were dismissed, four were fined and one was censured. The charge in each case was that the inspector permitted houses to be disinfected before the determination of the contagious disease.

Herzog Rating Stands.—The protest of Dr. Alfred W. Herzog as regards his rating on examination has been overruled by the Municipal Civil Service Commission, which has decided that taking into consideration the ratings received by others who tried the examination, there was nothing remarkable in the rating that had been given to him.

Work Lags on Woman's Hospital.—For some time past the work at the Woman's Hospital has been at a standstill save for the use of a very small temporary pavilion. It is expected, however, that work will be begun very soon on the new edifice, which is to be six stories in height, with lecture hall, chapel, private and ordinary wards and a new and thoroughly modern equipment, and which is expected to cost $610,000.

PENNSYLVANIA.

Rabies.—Two persons at West Chester and ten children at Punxsutawney are said to have been bitten by dogs proved by postmortem examination to have been affected by rabies.

Typhoid in Pittsburg.—Between July 1 and August 8 300 cases of typhoid fever were reported to the Pittsburg Board of Health, with 52 deaths, a death rate of 17.33 per cent. On August 10, 17 new cases were reported.

Oleomargarin for Poorhouse Inmates.—In the case of the Commonwealth against the County Commissioners and other officials of the Jefferson County poorhouse at Brookville on the charge of furnishing the inmates of the institution oleomargarin instead of butter, the defendants admitted the charge. The defense raises two questions to be settled by the court: First, the oleomargarin law is unconstitutional; second, a county poorhouse is not such a charitable institution as is contemplated by the law. A penalty of $1,000 fine or two years' imprisonment, or both, is provided for violation of the law.

Philadelphia.

Toy Pistol Prosecutions.—District Attorney Bell has begun prosecution of dealers who are charged with having sold toy pistols to minors. Several dealers, at a recent preliminary hearing, entered bail to answer at court. It is said to be the purpose of the prosecution to bring the cases to trial at an early date.

Isolation Hospital Nearly Under Roof.—The mayor and other city officials recently visited the Macalester farm, the site for the projected new municipal hospital. Sites for the buildings and plans for beautifying the grounds were approved. The one-story structure for the smallpox department with accommodations for about 200 patients, is nearly under roof, and is expected to be ready for the reception of patients next winter.

Impure Beer.—Several retail liquor dealers and bottlers have recently been arraigned before a magistrate charged by Dairy and Food Commissioner Warren with selling adulterated beer. The affidavits allege that the samples of beer analyzed contained salicylic acid. It is the avowed purpose to strike at the manufacturer of impure products, and it is probable that the retailers will simply be held as witnesses against the brewers.

To Succeed Welch.—Dr. B. Franklin Royer, chief resident physician of the Jefferson Medical College Hospital, has been appointed chief resident physician of the Municipal Hospital, and will begin his new duties September 1. Dr. William M. Welch, who for twenty-five years has been physician-in-charge of the Municipal Hospital, is made consulting physician to the institution. The office of chief resident physician is a new one, and city councils will be asked to create the position by ordinance.

The Ball-Park Catastrophe.—By the crowding of a balcony overhanging the street at the Philadelphia Ball Park on August 8, several hundred people were precipitated to the pavement. Many were very seriously injured, and ten deaths or more resulted. Several of the up-town hospitals were taxed to their utmost to care for the victims. The coroner and other city officials are taking great pains to fix the responsibility for the accident. It is claimed that timbers originally strong had become rotten through exposure for several years, but the whole matter remains to be settled by official investigation.

GENERAL.

Plague in Peru.—Bubonic plague has caused 24 cases and 15 deaths at Pacasmayo, Peru.

Yellow Fever in Mexico.—Alarm has been felt along the Texas border over the occurrence of several cases of yellow fever in Mexico. Quarantine was established against a few cities, but no serious outbreak has occurred.

Great Britain to Check Immigration.—The royal commission on alien immigration recommends regulations similar in many respects to those of the United States. No educational qualification is proposed. Provision is made for deportation at the expense of the ship company that brought the immigrant in case of proof of his undesirability during two years after arrival.

FOREIGN.

Personal.—Dr. Peter Martin Keller, Huntley, New Zealand, has been appointed surgeon-captain in the New Zealand volunteer medical staff.

Sixtieth Professional Anniversary.—The Nestor of German alienists, Dr. Laehr of Zehlendorf near Berlin, has recently celebrated the sixtieth anniversary of his entering on the practice of medicine. He was born in 1820, and was one of the founders of the German Psychiatric Society.

Von Leyden's Jubilee.—Prof. E. von Leyden of Berlin entered on his professional career, August 11, fifty years ago, and the anniversary was celebrated by his friends with much ceremony this year. The Berlin University, as is customary, renewed his diploma "with honor," and also those of Drs. A. Hildebrandt, L. Rosenthal and F. Polland, who graduated with him.

Charlatan Ads in the Berlin Papers.—Some time ago we announced that the publisher of three prominent daily papers in Berlin had applied to the local medical association for expert opinion on the medical ads in his papers, stating that he wished to accept only those that met the approval of the profession. The medical society complied with his request with pleased alacrity, but the charlatan ads are beginning to appear once more in his papers, as our German exchanges note in sorrow—possibly the medical experts are away on their vacation, one sarcastically suggests.

Scarcity of Hospital Accommodations at Moscow.—The city of Moscow has numerous hospitals and money has been lavishly given by philanthropic capitalists for model medical schools and clinics. It is with some surprise that we read that in June 1,457 sick persons were turned away from the city hospitals and 207 from the others on account of lack of accommodations. July 1 the total number of patients in the city hospitals was 4,722, and in the others 1,020. As the number of the insane is constantly increasing and the present institutions are already overcrowded, the municipal authorities have recently made arrangements to place the quiet insane patients in private houses.

Scientific Devotion of Roux and Metchnikoff.—Roux and Metchnikoff have succeeded, they believe, in inoculating a chimpanzee with syphilis. It is accepted as such by Fournier, although he remarks that the appearance of secondary symptoms would be still more conclusive. The researches are to be continued, and as the Institut Pasteur, with which these scientists are connected, is not rich enough to supply the necessary material in the line of chimpanzees and other monkeys required for the purpose, Roux and Metchnikoff propose to devote to it the prizes recently bestowed on them. As our readers will remember, Roux received the Osiris $20,000 prize and Metchnikoff a $1,000 prize from the Institute.

The Preventive Circular.—The Journal has mentioned the German "warning circular" to be distributed by physicians among their patients. It is written by Professors Erb, C. Fränkel and Jadassohn and the text is published in full in the *Allg. Med. Ct.-Ztg.* for August 8, 1903. It contains nine paragraphs, the whole about as long as a column and a half of The Journal. It states: 1, that sexual abstinence is not injurious to health as a rule; 2, describes the symptoms and contagiousness of gonorrhea and syphilis and their consequences; 3, warns against promiscuous intercourse, and that women may be capable of transmitting the disease without being aware of their infected condition; 4, warns that the most insignificant wound or lesion on the genitals may be the entering point for infection, and should be submitted at once to the examination of some qualified physician, avoiding quacks, nature healers, etc. "The danger of venereal diseases, which is frequently under-estimated and frequently over-estimated, may be materially diminished by appropriate medical assistance. Nearly every case can be completely cured, although a long time may elapse before this can be accomplished." 5. The subject himself is unable to tell when he is cured, and the qualified physician has to examine him again and again through months and years in order to follow the course of the disease and apply treatment at the proper moment. In a separate paragraph the subject is warned that he must not allow himself to be deterred from mercurial treatment by the ads of charlatans. "The general opinion of the medical profession is that it is necessary, extraordinarily effective, and can never do harm in the hands of a trained physician." "He who suspends treatment without the advice of a physician, has only himself to blame if symptoms recur, which may not be until after a long interval. Such neglect is not only liable to injure himself, but may be the means of injuring others." The German code is then cited to show that a penalty of three years' imprisonment or $250 fine may be imposed for personal injury or injury to health, while the penalty is much more severe if the loss of an eye or other important member results from the injury. The danger of infecting others during the stage of incubation is also emphasized, and the subject is warned always to inform his medical attendants later that he has had a venereal disease. In conclusion the circular cautions that there are no absolutely reliable protecting measures against venereal infection, but at the same time advises the use of some such measure, in regard to which the physician is alone competent to pass judgment. The danger of infection while under the influence of alcohol is commented on, and the extragenital sources of infection. Intimate contact with unknown persons or common use of pipes, razors, dishes, etc., is warned against, and fondling children whose medical antecedents are unknown. All persons with a venereal disease are cautioned in regard to the hygienic measures to prevent extragenital infection of others, as they may spread the disease by lack of care in this respect. These circulars are to be distributed to all physicians of Germany through the mediation of the county and local medical associations or the officials of the sickness insurance societies.

Correspondence.

Notes from Manchester and London.

London, July, 1903.

To the Editor:—Mr. George A. Wright, well known through his excellent work on early excision of the hip, is still active at the Royal Infirmary, Manchester, where the writer found him at work in the operating room. His first case was one of infraorbital neuralgia, which he treated by exposing the nerve and injecting into it a 2 per cent. solution of osmic acid; the results of this method, which does not abolish nerve function, are said to be very gratifying. In a case of extensive sinuses of the ilium, the opening was enlarged, and the sinus curetted and flushed out with turpentine, an application of which Mr. Wright thinks very highly. It is not painful, and does not interfere with primary union. The third operation was the opening of a pulmonary abscess in a young child.

In conversation Mr. Wright said he was treating young children with congenital clubfoot with appropriate tarsectomies, and the double cases with astragalectomy. In tuberculous knees erosion, through a transverse incision dividing the patella, is the favorite treatment. The patella is afterward stitched with silk. Hip cases are treated at first with the Thomas splint, but if after ten or twelve months they have not done well the joint is excised. Mr. Wright does not favor the manual replacement of congenitally dislocated hips on the ground that the acetabulum is usually too defective to assure a permanent result.

Although Mr. Wright has resigned his connection with the Children's Hospital at Pendlebury, about four miles from Manchester, he very kindly gave me a card to the house surgeon, who was most courteous. The Pendlebury Hospital is modern, and is built in separate wards, one story high, connected by roomy corridors, and with ample space between. Thus light and ventilation are abundantly provided, and the children are easily moved on mattresses into the open air. Each ward has 26 beds, and two separate beds for the isolation of contagious diseases. The treatment of hip, knee and talipes cases was much practiced by Mr. Wright. Of two cases of laminectomy for Pott's paraplegia one had improved considerably, the other only as to control of sphincters. One case of double luxation of the hip was in a frame holding the thighs abducted, but although it was four months after the operaton, the patient was still in bed. Knockknees are corrected after supracondylar division of the femur with the Adams saw, but plaster is not applied until a week or ten days later. Tendon grafting for paralytic deformities was frequently practiced.

On reaching London the writer found but little activity at the Royal Orthopedic and National Orthopedic hospitals, as it was the dull season. Each has about 60 beds and a large out-patient service; it is gratifying to learn that there is a good prospect for the consolidation of the two institutions, and for the erection of a large, modern hospital. Some of the surgeons connected with these institutions are very conservative, confining their operative work to tenotomies and bloodless manipulations.

It was, however, the writer's privilege to see Mr. E. M. Little correct a paralytic varus with the Thomas wrench, and also do an improved Phelps operation in another case. The modification consisted in making a v-shaped incision, with the base at the outer border of the sole, enabling the operator to cover over the deep wound.

Of all the London surgeons the writer was most anxious to see Mr. Bernard Roth, who is, perhaps, the foremost representativeof the Purdy gymnastic treatment of lateral curvature of the spine. Mr. Roth demonstrated his work in London, and very kindly invited the writer to accompany him to Brighton, about an hour's run, where he also has a large class. The patients ranged in age from early childhood to advanced life; all were treated by exercises alone, and each in turn passed under the hands of Mr. Roth, who was at all times the center of inspiration. The system is peculiar, as the work is entirely individual, and yet many patients are handled in a short space of time. The exercises, mainly resistive flexion, extension, and rotation of the trunk, and horizontal exercises for trunk and legs are extremely simple, but so planned as to develop the weakened muscles very rapidly. Mr. Roth's practice is to give symmetrical exercises daily for a month, then to ascertain the "key-note" position and to include exercises in this position for two months longer; after this the patient practices certain exercises at home, reporting at long intervals; no supports are used. Careful notes and patterns are taken of each patient, so that progress can be tested. Mr. Roth, like Mr. Jones and other eminent authorities, freely admits that the rotation is incurable, but pain, which he finds in the majority of cases, is relieved, health and vigor imparted, the progress of the affection checked, and in favorable cases the posture improved. With the help of several assistants, Mr. Roth is able to treat some thirty cases in about two hours. Between each set of exercises, the patients rest on benches at the sides of the room; they seem to heartily enjoy the work, a point which Mr. Roth considers essential to success. The strength developed in a short time in the muscles of the back and waist is surprising, but far more wonderful are the energy and skill which Mr. Roth puts into his work, his general control of the class, and the directness of his methods. Practically the only apparatus used are the vertical ladder, the high bench, and the padded bar, but with his hands and these simple appliances Mr. Roth obtains speedy and enviable results. Henry Ling Taylor.

(New York address, 125 W. 58th Street.)

The Alleged Cure for Lockjaw.

Chicago, Aug. 25, 1903.

To the Editor:—Certain publicity given by the lay press to a case of tetanus recently treated by me, and an editorial in The Journal last week, make the following statement necessary:

In the first place, I disclaim any pretention to the discovery of a specific cure for tetanus or for any other disease. However, during the past year I have made a study of the diuretic effects of certain salt solutions when injected directly into the circulation in mammals (rabbits), and the power of such diuretic saline solutions to eliminate soluble toxins from the body. To prove the theory I chose tetanus toxin, which I found could be eliminated from the body, at least in part, after sufficient time had elapsed for it to set up its characteristic symptoms. I tested this on a number of animals (each animal being controlled) with a large per cent. of positive results.

In the case of tetanus in question I simply carried over my animal experiments to a human being, and in this particular case with positive results. The case was a boy, 11 years old, who had sustained a lacerated wound of the foot. Eight days after the injury tetanus began to develop. The symptoms did not progress very rapidly. I was called to see the boy nine days after the first appearance of the disease, and while the symptoms were pronounced, all the voluntary muscles being in a state of tetanus, I gave the opinion that the disease would probably assume a chronic character. At any rate, I considcied the patient had about as good a chance to recover without as with the intervention of physicians. Four days afterward (the thirteenth day of the disease) I was called again, and found the boy manifesting alarming symptoms of acute tetanus. His whole voluntary muscular system was in a complete tetanus and convulsions were following each other in rapid succession. Pulse 150 and temperature 105. Bowels *had been moving involuntarily*. In two and a half hours I injected into the circulation 600 c.c. of a solution containing $NaCl$, Na_2SO_4, $Na_3C_6H_5O_7$, and $CaCl_2$ in the proportions given below. During the injection the pulse fell to 104 and remained so until the following afternoon, when the pulse began to increase and soon reached 140, and convulsions began to threaten the life of the patient again. The treatment was repeated with a like good result, the pulse this time reaching 98. A large excretion of urine followed. The next day the pulse went up to 130, and the treatment was repeated, when the pulse fell to 94 and the temperature to 100 (per rectum). No further treatment seemed necessary, and the boy has steadily improved ever since, now the tenth day after the last treatment.

When I began the treatment the symptoms indicated a fatal termination, and that before many hours, but as I have had opportunity to see at least one case recover from seemingly an acute infection without any treatment at all I must refrain from drawing any conclusions from this case.

Further, let me say, such a treatment of disease partakes of none of the elements of the specific antitoxin treatment of disease. It is simply a cell stimulant, combined with diuresis. I can say, at least, it is a safe treatment and if carried out slowly is certainly beneficial, but not a specific.

The following is the solution:

M/8 $NaCl$	500 c.c.
M/8 $Na_2SO_4+10H_2O$	250 c.c.
M/24 $Na_3C_6H_5O_7+5\frac{1}{2}H_2O$	245 c.c.
M/8 $CaCl_2+6H_2O$	5 c.c.
	1000 c.c.

This being interpreted gives the following:

℞.	Sodii chlorid	7	3125
	Sodii sulph	10	06+
	Sodii citrat	3	364+
	Calcii chlorid	0	136+
	Aquæ	1000	00

To get the best effects the injection should proceed very slowly, not more than 3 c.c. per minute.

While as yet nothing is claimed for the treatment, I hope before long to be in possession of sufficient clinical data to either prove or disprove its efficiency, and until such a test is made and published in a *professional* manner, no *confidence* is to be placed in the treatment. S. A. Matthews, M.D.

Queries and Minor Notes.

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

NAUHEIM BATHS.

Mansfield, La., Aug. 3, 1903.

To the Editor:—Please let me know the composition, mode of application and indications for the artificial Nauheim baths in chronic heart disease. H. J. Parsons.

Ans.—The composition of the Nauheim baths is largely chlorid of sodium and chlorid of calcium, at least they are the more active constituents. There are a number of springs that are utilized and the baths are also given artificially to some extent. Bezley Thorne says that the Schott brothers have insisted that similar, if not identical, effects can be obtained from artificial baths, prepared to imitate the Nauheim waters in their principal mineral ingredients. "Thus it is recommended that the treatment should commence with a 1 per cent. solution of chlorid of sodium, and that the strength should be gradually raised to 2 or 3 per cent. For increasing the cutaneous excitation, chlorid of calcium is the salt to be relied on. The initial strength of the bath, with regard to that ingredient, should be 0.2 per cent., approximately that of No. 7 spring, and, by increasing additions, it may be raised to 0.3 per cent., that is, to about the strength of No. 12 spring, and eventually to 0.5 per cent. Such varying degrees of concentration may be obtained by the proportional use of the crystallized Nauheim bath salt, of the mother-lye or of calcium chlorid, and of Mediterranean sea residue, which also contains chlorid of sodium and of calcium in the proportions necessary for the preparations of initial baths, together with traces of bromids and iodids.

"For the production of carbonic acid effervescence the action of hydrochloric acid on bicarbonate of soda may be relied on. As a state of chemical purity is not required by the circumstances of the case, the articles of commerce are sufficient for the purpose. Two ways of employing the reagents are suggested, the one calculated to induce slow and gradual, the other rapid and almost immediate effervescence. In the case of the first, the various salts, including the requisite proportion of bicarbonate of soda, having been dissolved, a bottle containing the acid is laid at the bottom of the bath and, the stopper having been withdrawn, it is moved about from time to time. The bath will be ready for use in two or three hours. For the more rapid production of effervescence the stopper of the bottle containing the acid is loosened but retained in position, the bottle having then been inverted and lowered until its mouth is just below the surface of the water, the stopper is withdrawn and the bottle is moved about so as to diffuse a layer of acid as uniformly as possible over the surface of the bath. By this means the bath will be prepared in about five minutes. It will be useful to employ baths of three degrees of effervescence:

Mild—½ lb. $NaHCO_3$ to ¾ lb. HCl (25 per cent.).
Medium—1 lb. $NaHCO_3$ to 1½ lbs. HCl.
Strong (Sprudel strength)—2 lbs. $NaHCO_3$ to 3 lbs. HCl.

"Except in the case of porcelain baths it is desirable to ensure a slight excess of alkali in order to prevent corrosion."

The indications are, in general, feeble heart action and circulation, lack of vasomotor tone, dilatation. Consult a good work on therapeutics.

DUTY OF PHYSICIAN IN EMERGENCY CASE.

Minnesota, Aug. 22, 1903.

To the Editor:—A few days ago a friend of the writer was hurt in a gasolene launch at a lake resort, three miles from town. The injury consisted in a flesh wound in the upper part of leg, five or six inches long. The writer, being the family physician, was telephoned for, but, due to unavoidable detention, could not get there for three-quarters of an hour. On the arrival of the writer he found that another physician, who is on his vacation and who lives in St. Louis, had been called in, as he was living in the next house. This physician had shaved the leg and put on an antiseptic cotton dressing, but, having no instruments, he had to await my arrival. When I arrived, bringing the necessary instruments, bandages, etc., the emergency physician, without any explanation, helped himself to the instruments and proceeded to sew up the wound. This he did without protest from me, as I thought it best not to raise any trouble at the time. An explanation between the two physicians happened later; the St. Louis physician maintaining that, inasmuch as he had started the work, he had a right to help himself to the other physician's instruments and finish; the family physician, however, claims that, inasmuch as the physician was from St. Louis and outside his jurisdiction, had no instruments, and as he had done all he could, he should immediately have withdrawn from the case, leaving it to the family physician to finish. Who is right? L. G.

Ans.—The Principles of Medical Ethics, Article iv, Section 6, is explicit: "When a physician is called to an urgent case, because the family attendant is not at hand, unless assistance in consultation is desired, the former should resign the care of the patient immediately on the arrival of the family physician."

WHOLLY SMOKE.

Dr. C. J. Gose, *Kinderhook, Ill., sends us the following*, with the instruction, if it is not fit for publication, to convert it into smoke:

I've heard of lies, great big lies,
  And told a few myself,
But of all the lies I ever heard,
  This knocks me off the shelf.

A doctor man once told me this,
  (And I thought him very fractious),
"In my time I've been behind
  Three weeks in my practice."

EXCLUSION OF PHYSICIAN'S OFFICE FROM RESIDENCE DISTRICT.

St. Louis, Aug. 21, 1903.

To the Editor:—Has the attempt ever been made to apply the restrictions which apply to a trade or business against a physician desiring to regularly practice the learned profession of medicine in a restricted residence district? W. D.

Ans.—Do you mean to ask: Can a physician be prevented from opening an office anywhere he wishes to? Leaving out of account saloons, *gambling* houses or other businesses that may be decided to be nuisances (for example, a rendering plant), we know of no *legal restriction* that can exclude a business shop from any district, except the *agreement* in lease or deed or otherwise that property is not to be used for certain specified purposes. Since the owner of property is not a servant of the public, he may refuse to sell or lease to undesirable persons. This has excluded physicians because they were going to open offices, which action was undesired by lessors.

MENTAL STATUS IN PHTHISIS—INFORMATION WANTED.

OKLAHOMA CITY, O. T., Aug. 21, 1903.

To the Editor:—Recognizing THE JOURNAL of the American Medical Association as the principal organ of leading physicians of America, and desiring more authority on the following subject, I wish to ask two simple questions, and will thank in advance as many readers as will kindly state their own experience and cite such authorities as they may have read on the subject, giving chapter and page: 1. Are persons who are afflicted with pulmonary consumption prone to attribute their physical weakness to some other cause than consumption? 2. Are persons so afflicted more easily turned against their dearest friends by designing people than when in a normal state of health? J. L. SHORT.

Marriages.

HERBERT E. MARKWORT, M.D., to Miss Helen Husemeyer, both of St. Louis, August 8.

JOHN JACOB WUERTH, M.D., to Miss Georgia Marion Pitkin, both of Chicago, August 18.

CHARLES D. SHELTON, M.D., to Miss Jessie Ferguson, both of Bloomfield, Iowa, August 5.

ABRAHAM GIVEN SHORTLE, M.D., to Miss Alice Stanley Mitchell, both of Chicago, August 18.

NELSON MERRILL, M.D., Marshalltown, Iowa, to Miss Flora Belle McMahon of Cissna Park, Ill., August 5.

EDWIN A. DAVIS, M.D., Mammoth, W. Va., to Miss May Langhorne Johnson of St. Louis, at Hardine, near Elkins, W. Va., August 6.

Deaths.

George D. Cross, M.D. University of Pennsylvania, Philadelphia, 1889, a leading ophthalmologist of Pennsylvania, assistant surgeon Wills Eye Hospital, and ophthalmologist St. Clement's Hospital, Philadelphia, a member of the American Medical Association, Delaware County Medical Society, Philadelphia Medical Society and the Medical Society of the State of Pennsylvania, died at his home in Chester, Pa., August 8, after an illness of eighteen months, aged 51.

Patrick Carter Lodge, M.D. University of Vermont, Burlington, 1899, whose name was dropped from the roll of the Waterbury (Conn.) Medical Association, after an acrimonious discussion regarding the nature and treatment of smallpox, shot himself in the head, at Waterbury, August 5, and died a few hours later, aged nearly 60.

Francis Marion Powell, M.D. Starling Medical College, Columbus, Ohio, 1875, for more than twenty years superintendent of the Iowa Institution for Feeble-Minded Children, Glenwood, a member of the Iowa State Medical Society, died at Mercy Hospital, Chicago, August 16, after an operation for gallstones, aged 55.

Josiah D. Cotton, M.D. University of Louisville, Ky., 1847, surgeon of the Ninety-Second Ohio Volunteer Infantry in the Civil War, a member of the American Medical Association, and one of the oldest members of the Ohio State Medical Society, died at his home in Marietta, Ohio, August 6, after a short illness, aged 81.

Clarence John Garitee, M.D. University of Pennsylvania, Philadelphia, 1894, an active member of the Philadelphia Pathological Society, Philadelphia Pediatric Society and Philadelphia County Medical Society, died at his home in Philadelphia, August 10, from heart disease, following septicemia, aged 31.

Samuel Bryant Potter, M.D. Jefferson Medical College, Philadelphia, 1854, a member of the American Medical Association, and for several years vice-president of the North Central Ohio Medical Society, died at his home in Fredericktown, Ohio, August 5, from stricture of the bowel, aged 74.

George W. Rolerfort, M.D. Leonard Medical School, Raleigh, N. C., 1889, a member of the American Medical Association, Medical Society of the State of New Jersey, and Essex County Medical Society, died suddenly from apoplexy at his home in Newark, August 6, aged 43.

L. W. Bacon, M.D. Medical School of Maine, Bowdoin College, Brunswick, who retired from practice at Portage, Wis., in 1887, died at the home of his daughters in Minneapolis, August 14, from heart disease, aged 96.

Charles W. Piper, M.D. University of Michigan, Ann Arbor, 1884, of Wurtsboro, N. Y., a member of the New York State Medical Association, died at the New York Hospital from septicemia due to an autopsy wound, August 10, aged 46.

Joseph Muir Corbett, M.B., Ch.B., Glasgow, 1897, surgeon of the Anchor Line steamer *Astoria*, was drowned in the Hudson River, and his body was found August 7. His death is believed to have been accidental.

Burwell G. Abernathy, M.D. College of Physicians and Surgeons, Baltimore, 1880, one of the organizers of the Jefferson County (Ala.) Medical Society, died at his home in Tampa, Fla., July 30, after a long illness.

George Johnston, M.D. Jefferson Medical College, Philadelphia, who retired from active practice about ten years ago, died at his home in Connellsville, Pa., August 9, aged 84.

Moses Bruckheimer, M.D. National Medical College, Washington, D. C., 1868, died at his home in Washington, D. C., August 7, after a short illness, aged 63.

Robert Morrison Rhea, M.D. Jefferson Medical College, Philadelphia, 1868, died at his home in Knoxville, Tenn., from acute gastritis, August 11, aged 60.

T. J. I. Pattillo, M.D., of Lee County, Ga., died at the home of his son in Macon, August 6, aged 71.

Miscellany.

Microbes Suggested in the Year 1726.—Dr. John Knott, Dublin, Ireland, writing in appreciation of "Medical Discoveries by the Non-Medical," which appeared in THE JOURNAL, May 30, 1903, says he ventures "to hope that it may interest some medical readers in the glorious land of freedom which has so long proved the refuge of the Irish race, to peruse some remarks—published in Dublin in 1726—sixty-two years before Samuel Foote's play appeared. The writer was (afterward Sir) Edward Barry, M.D. The following quotation forms the concluding paper of this author's work: 'A Treatise on a Consumption of the Lungs':"

> Thus I have endeavored after the most plain, and rational manner, to account for the various Origine, and Progress of this Distemper, through its different Stages: And without forming any deceiving *Hypothesis*, have shewn how a Collection of *purulent Matter* in the *Lungs*, can only proceed from *previous Obstructions* of the *Vessels*, or a *Solution* of their *Continuity:* There is no Disease perhaps which rightly to explain, requires a more universal Knowledge of the *Animal Oeconomy;* and which hitherto has been described after a more imperfect, confused Manner. In this *Treatise* I have proposed rather to lay down a right Account of this *Distemper,* than to examine the errors of others: But, however, I cannot well avoid mentioning the Author of a late *Hypothesis* which some may be more inclined to believe, since no less than *ocular Demonstration* is offered to confirm the truth of it. This Person takes Notice, that *Ulcers* in the *Lungs* when narrowly viewed with *Microscopes,* are covered with several *Insects,* and from thence concludes that *they take* their first Origine from such *Animalcules,* which being inspired with the Air, fix their Situation on the *Lungs,* and erode and ulcerate the *Vessels:* And from the same *irregular Way of Reasoning,* these *Animalcules* have been by others supposed the Cause of several Distempers, and particularly such as are *contagious:* But these Appearances may be easily accounted for, as the unavoidable Effects, not the Causes of these Diseases: For it is certain, that there is almost an infinite Number and Variety *of* such *Animalcules* perpetually floating in the Air, whose chief Business consists in searching out a Place where they may find Nourishment, and a proper Situation *for* themselves and their young: But every living Part of a human Body has a *perpetual Pulsation,* which *tho'* imperceptible to our Eyes, is sufficiently *strong to give* the most uneasy Motion to those *Animalcules* so minutely small; and entirely prevent them from fixing there *for any time: But* as there is no Circulation in any part that is ulcerated, the Inconvenience of this Pulsation immediately ceases, and the *purulent Matter* sends forth perpetual Steams, fit to nourish *them: and by* being viscid and adhesive, makes their *Nidus* so secure, that the Motion of the *Vessels* under the ulcerated Part is not strong enough to dislodge them. After the same Manner, the Blasts of *Trees* and *Plants,* may be more rationally accounted for, than by bringing small *Animalcules* and their Eggs so many hundred Leagues to produce these *Alterations.* For there is a Circulation of *Humours* through every Part of Plants, and Trees, and in their aerial Tubes a more remarkable Pulsation, which is sufficiently strong to prevent these *Animalcules* (perhaps more minute than *such as are observed* on *Animal Bodies*) from having a fixed and safe Situation there. But whenever any particular Wind, or Alteration of the Air, by either giving a sudden contraction *to their tender Vessels,* or a *Viscidity* to their *Juices,* produces a *Stagnation,* and thence a *Gangrene,* either in any particular Part, or in the whole, such *Animalcules* will quickly secure this quiet State, and Nourishment.

State Boards of Registration.

Tennessee Report.—Dr. T. J. Happel, secretary of the State Board of Medical Examiners of Tennessee, reports the written examination held at Memphis, Nashville and Knoxville, March 30 and 31, 1903. (The examinations are held in the three divisions of the state on the same days. The board meets as soon as convenient and passes on the papers.) The number of subjects examined in was 8; total number of questions, 64; percentage required to pass, 75; the total number examined was 150, of whom 88 were graduates; the number passed was 120, of whom 78 were graduates. This shows that 32 per cent. of the non-graduates failed, while only 11 per cent. of the graduates failed. The graduates are listed below.

PASSED.

Candidate.	Sch. of Pract.	College.	Year. Grad.	Per Cent.
1	R.	Vanderbilt University	1903	80
3	R.	Vanderbilt University	1903	86
4	R.	Vanderbilt University	1903	87
6	R.	Vanderbilt University	1903	80
10	R.	Vanderbilt University	1903	85
34	R.	Vanderbilt University	1903	86
35	R.	Vanderbilt University	1903	87
36	R.	Vanderbilt University	1903	83
37	R.	Vanderbilt University	1903	85
39	R.	Vanderbilt University	1903	90
45	R.	Vanderbilt University	1903	75
56	R.	Vanderbilt University	1898	90
2	R.	Tulane University	1901	88
5	R.	Memphis Hospital Medical College	1897	85
113	R.	Memphis Hospital Medical College	1898	75
205	R.	Memphis Hospital Medical College	1903	85
206	R.	Memphis Hospital Medical College	1903	86
207	R.	Memphis Hospital Medical College	1903	81
210	R.	Memphis Hospital Medical College	1903	78
201	R.	Memphis Hospital Medical College	1903	75
220	R.	Memphis Hospital Medical College	1903	91
221	R.	Memphis Hospital Medical College	1903	78
225	R.	Memphis Hospital Medical College	1903	93
226	R.	Memphis Hospital Medical College	1903	86
227	R.	Memphis Hospital Medical College	1903	94
229	R.	Memphis Hospital Medical College	1903	85
230	R.	Memphis Hospital Medical College	1903	92
234	R.	Memphis Hospital Medical College	1903	81
239	R.	Memphis Hospital Medical College	1903	76
243	R.	Memphis Hospital Medical College	1903	78
245	R.	Memphis Hospital Medical College	1903	80
246	R.	Memphis Hospital Medical College	1903	91
216	R.	Memphis Hospital Medical College	1903	77
250	R.	Memphis Hospital Medical College	1903	78
252	R.	Memphis Hospital Medical College	1903	88
7	R.	Hospital Medical College, Louisville	1903	86
134	R.	Hospital Medical College, Louisville, Ky.	1897	75
200	R.	Hospital Medical College, Louisville, Ky.	1901	78
13	R.	University of Nashville	1903	77
17	R.	University of Nashville	1903	84
24	R.	University of Nashville	1903	78
202	R.	University of Nashville	1901	82
14	R.	University of the South, Sewanee	1900	78
25	R.	University of Tennessee	1903	80
26	R.	University of Tennessee	1903	91
27	R.	University of Tennessee	1903	85
28	R.	University of Tennessee	1903	75
30	R.	University of Tennessee	1903	88
44	R.	University of Tennessee	1900	75
59	R.	University of Tennessee	1903	90
111	R.	University of Maryland	1901	92
116	R.	University of Maryland	1899	80
117	R.	University of Michigan	1902	93
130	R.	University of Illinois	1902	75
131	R.	University of Illinois	1902	83
214	R.	University of Virginia	1894	94
255	R.	University of Virginia	1897	98
22	E.	Lincoln Medical College, Lincoln, Neb.	1902	75
32	R.	American Medical Missionary College	1899	85
46	R.	Americal Medical Missionary College	1902	91
38	R.	Medico-Chirurgical College, Philadelphia	1894	85
109	R.	Medico-Chirurgical College, Philadelphia	1901	83
47	R.	Meharry Medical College	1903	81
48	R.	Meharry Medical College	1903	75
55	R.	Ohio Medical College	1902	78
107	R.	Tennessee Medical College	1903	75
108	R.	Tennessee Medical College	1903	82
110	R.	Tennessee Medical College	1903	88
119	R.	Tennessee Medical College	1903	82
121	R.	Tennessee Medical College	1903	90
126	R.	Tennessee Medical College	1903	89
129	R.	Tennessee Medical College	1903	75
112	R.	Georgetown Medical College	1893	95
115	R.	Atlanta Medical College	1893	76
127	R.	Alabama Medical College, Mobile	1887	81
124	R.	Birmingham Medical College, Alabama	1898	79
218	R.	Louisville Medical College	1903	82
251	R.	College of Phys. and Surgs., Baltimore	1884	75

FAILED.

Candidate.	Sch. of Pract.	College.	Year. Grad.	Per Cent.
11	E.	Georgia Eclectic College	1903	48
49	R.	University of Nashville	1903	67
50	(?)	Medical Institute, Marion, Ind	1896	39
54	R.	College of Phys. and Surgs., Baltimore	1876	70
203	(?)	Central School of Medicine and Science	1901	74
215	R.	Medical College of Ohio	1903	66
224	R.	Memphis Hospital Medical College	1903	73
254	R.	Memphis Hospital Medical College	1903	70

Applicants 231 and 232 were rejected for violating the obligation in giving and receiving assistance.

Medical Organization.

MEDICAL ORGANIZATION METHODS AND BENEFITS.

J. N. M'CORMACK, M.D.

In the report of the Committee on Organization made to the American Medical Association at the St. Paul Session in 1901, and in the valuable paper by Dr. Simmons along the same lines later, particular attention was devoted to the unorganized and almost chaotic condition of the profession of this country as a whole, in spite of the existence of so many national, semi-national and state societies of more or less excellence, to the evils resulting and inseparable therefrom, and to the urgent necessity of a uniform, systematic and universal reorganization *as the only possible remedy for these conditions.*

That the importance of all this was realized, and that the profession was at last ready and ripe for reform was shown by the prompt and unanimous acceptance of the entire plan of reorganization proposed for the Association itself, and the continuance of the committee with instructions to prepare uniform constitutions and by-laws to be recommended for adoption by all state and county societies. This was still more forcibly shown by the adoption of these in thirty-one states within fifteen *months after they were promulgated at the Saratoga* meeting, while in several states favorable reports from committees appointed to consider the subject only await the annual meetings of their respective state societies to ensure their adoption. It seems now only a question of time until every state in the Union will have accepted them, and be using the same methods to secure the same results.

If this were all, the bare statement of the foregoing facts would indicate a degree of widespread interest and activity in the medical profession of this country without a parallel in its history. But this is not all. Within all of the states which reorganized in 1902 the acceptance of the new plan was systematically followed up by the organization of county societies, and an increase in total membership and interest quite as remarkable. This interest and enthusiasm was so great that not only the councilors and other officers especially selected for the purpose took up the work with commendable zeal, but that volunteer efforts in the same direction were and are being effectively made by many others who caught the infection.

PERMANENCE.

As a natural result of this general awakening, requests have come from more thoughtful workers of every quarter for information as to how these efforts and this enthusiasm may be so intelligently directed as to make certain that the reform so auspiciously begun may be made both thorough and permanent. It is feared by many that the rapid growth of the movement, and the zeal and enthusiasm responsible for this, may themselves become sources of danger, because of the reaction and apathy likely to follow. A very proper fear is also expressed that the impression will go out that the reform will be complete and the work over as soon as all the states have accepted the new plan, and societies have been organized in every county, and especially that the latter will be left to languish and die as soon as the first sentiment which created them subsides. In the light of history, as well as in the very nature of the problems involved, these fears are well grounded and are entitled to the most careful consideration.

PROVISION AGAINST DANGERS.

That the Association fully appreciated all of these dangers in advance, and made every possible provision against them will be readily shown by such a study of the various constitutions and by-laws of the entire system, from the county societies up to the American Medical Association, as every one should give them who desires to take an intelligent part in this work. *In fact, it will be found that under* the new order of things one of the chief functions of the higher organizations, within their respective spheres, is to organize, maintain and form a bond of union between the county societies. One of their principal uses and powers will be, through the well-devised delegate system, to collect and concentrate the influence and represent the opinion of a united profession, as developed and expressed in the county societies, on all the great questions relating to the educational and scientific advancement of the profession itself, or for the protection and promotion of the public health interests of the whole people. Through the same system they may be made equally efficient in radiating and diffusing the spirit of scientific investigation, and the generous emulation and mutual respect and forbearance engendered by the contact of the most advanced and liberal members gathered at the annual meetings, back through the system of delegates and organizations to the most remote society. Through such action and reaction of enlightening and ennobling influences, and the systematic supervision provided through the councilors for every county in every state, aided by THE JOURNAL of the Association and the journals or bulletins in each state, sent free to all members, all possible safeguards are made for the permanency and efficiency of these organizations in theory. With such incentives, instruction and machinery, each state association must deal with the problem within its own jurisdiction on the broad yet painstaking lines which will now be considered.

ESSENTIAL FEATURES IN STATE WORK.

While provision is made for councilor district societies and other details which may grow in importance in the future, there are five essential features in the plan on which both the immediate success and the permanency of the work of each state association depends. Named in the order of their importance they are: 1. The county society, as the unit of organization, and the foundation of, and the door to, everything above it. 2. A council, selected from the profession at large, to represent and act for the Association under well-defined restrictions in the interval of the annual meetings, and whose individual members are charged with the organization, supervision and well-being of the county societies within their respective jurisdictions. 3. A house of delegates, composed of a limited number of specially selected representatives from the county societies, as the business body of the association. To it is committed the duty of fostering in every legitimate way the scientific, legislative and material interests of the profession at the annual meetings. 4. The general meeting, made up of all the members of all the county societies who will attend, which can devote its entire time and attention to the reading and discussion of papers, and reports of scientific research and investigation. 5. A card index register for each county, and for the state, showing at a glance the status and antecedents of each physician of the jurisdiction, reputable and disreputable, including his name and address, and furnishing reliable information as a basis for an official medical directory for each state, by counties, and for the United States. To this list there should probably be added a bulletin or journal published under the auspices of the association, and sent free to all members, as a means of constant communication between the county societies, and between them and the councilors and other officials, as well as for the early publication and wide distribution of the transactions.

COUNTY SOCIETIES.

All of these features or departments are so interdependent as to be essential to the complete and permanent organization contemplated, but it will be perceived at once that the county society is made the bed-rock on which the entire superstructure rests; that it is made the chief function of the individual councilors, provided for every district in every state, to see that these are organized for and kept alive to the best interests of the members composing them, and of the profession as a whole, that the influence of every officer and agency in the entire system is focused on and directed to the same end, and that all these are to be continued until every physician of every county in every state, who can be made worthy of it, is brought under the educational and elevating influence of some county medical society. Such an organization of the profession as this is ideal, but is believed to be entirely possible, if this possibility and the necessity for it is once fully appreciated by the controlling influences in each state.

WHY SO DIFFICULT TO MAINTAIN.

For obvious reasons it has always been easy to induce leading men from widely separated sections to attend and keep up the interest in the national, the state, and even in the district medical societies, but the problems to be faced in making the frequent meetings of local or county organizations, composed of those who have, or at least think they have, competing personal and professional interests, sufficiently interesting and harmonious to secure the requisite attendance, month after month and year after year, are far different. In reality all their interests are mutual. In the best and broadest sense what benefits or hurts one benefits or hurts all. To convince them that this is true is the problem now before the profession. It has been done to a degree in a few states, and in some counties in all the states, and after a large experience the writer feels assured that it is possible everywhere. "What men have done other men can do." The difficulties are on the surface and will disappear in the face of a full recognition of their nature, and of a kind but frank and unsparing discussion.

TROUBLES OF LOCAL ORIGIN.

Widespread as are these difficulties, extending from ocean to ocean, and baneful as have been their effects on every interest of the profession, when reduced to the last analysis it will be found that all of them, large and small, in city or country, are directly traceable to rivalry and jealousy between local doctors who are in each other's way or between competing schools in the same city. A clear understanding of the truth of this proposition is essential to the purpose now in hand. Physicians are the most agreeable men in every community except in their relations with their rivals. They are often like Damon and Pythias with those from a distant city or community, while barely on speaking terms with equally good physicians of their own town or neighborhood. As these conditions largely create and emphasize the necessity for universal local organization, and at the same time, paradoxical as it may appear, constitute the chief obstacle to its accomplishment, they are entitled to a detailed consideration not hitherto accorded them.

RESPONSIBILITY OF MEDICAL COLLEGES.

If we will consider the influence these conditions exert continuously on a young man taking up the study of medicine, from his entrance in school up to his graduation, follow him through his early experience as a practitioner, and then make the application general, we fairly epitomize evils as widely prevalent as they are deplorable. Matriculating in one of our average low-grade schools, three, four or five in a city where there is only room or need for one, all probably without endowment, and run as private commercial enterprises, with the fierce struggle for patronage and existence inseparable from such conditions, he is surrounded more or less constantly throughout his college career, the formative period of his professional life, by an atmosphere of exaggeration, misrepresentation and falsehood, as to other schools and teachers, neither worse nor better than his own. Without an hour's training as to the ethics of his profession, or business methods, or even a suggestion as to the duty or value of society membership, our young graduate leaves his alma mater probably conscious that he is none too well qualified for the duties of his high calling, but anxious to learn, and especially craving the practical knowledge which he believes will come with experience, and from association with his professional brethren.

(To be continued.)

Coleman County (Texas) Medical Society.

This society has been organized according to the plan of the American Medical Association. Dr. Newton Long, Santa Anna, was elected president; Dr. Samuel A. Lowrie, Silver Valley, vice-president, and Dr. James G. Pope, Coleman, secretary and treasurer.

Allamakee County (Iowa) Medical Society.

Physicians of Allamakee County met in Lansing, August 4, and formed a county medical society with the following officers: Dr. L. C. Myers, Rossville, president; Dr. E. J. Gable, New Albin, vice-president, and Dr. John Huecker, Lansing, secretary and treasurer.

Adair-Russell County (Ky.) Medical Society.

Dr. James G. Carpenter, Stanford, Ky., councilor for the Seventh District, has organized this society in accordance with the suggestions of the American Medical Association, with 15 charter members. The following officers were elected: Dr. Uriah L. Taylor, Columbia, president; Dr. William Blair, Glen's Fork, vice-president; Dr. James R. Walford, Montpelier, treasurer; Dr. James S. Rowe, Jamestown, secretary, and Drs. R. D. Havions, Russell Springs, Joel B. Scholl, Jabez, and W. R. Grissom, Columbia, censors.

Barron-Gates-Polk County (Wis.) Medical Society.

At a meeting of the Barron County Medical Society at Barron, August 13, the organization was disbanded and an inter-county society formed embracing the counties of Barron, Gates and Polk, with the following officers: President, Dr. Olaf M. Sattre, Rice Lake; vice-presidents. Drs. Clark C. Post, Barron; W. F. O'Connor, Tony, and Herbert B. Commett, Amery; state delegate, Dr. Gentz Perry, Amery; censors, Drs. Axel Em Hedback, Barron; Charles R. Hudgel, Ladysmith, and Abraham L. Wells, Clear Lake. The new society will be auxiliary to the state and national societies.

Societies.

American Eclectic-Therapeutic Association.—The thirteenth annual meeting will be held at the Hotel Windsor, Atlantic City, N. J., September 22, 23 and 24.

Medical Society of Virginia.—The thirty-fourth annual meeting will be held in Roanoke, September 15, 16 and 17, under the presidency of Dr. John N. Upshur. Richmond.

Russell Springs (Ky.) Medical Society.—At the annual meeting recently held Dr. Joel B. Scholl, Jabez, was elected president; Dr. Lewis F. Hammonds, Dunnville, vice-president, and Dr. L. D. Hammond, Irvine's Store, secretary and treasurer. The next meeting will be held in Columbia, in August, 1904. The feature of the meeting was an address by the president on "Professional Union," as a result of which the Adair-Russell County Medical Society was organized.

American Pharmaceutical Association.—At the fifty-first annual meeting held at Mackinac Island, Mich., August 4, the following officers were elected: President, Lewis C. Hopp, Cleveland; vice-presidents, W. C. Alpers, New York; A. R. Rohring, U. S. M. and P. H. Service, and Dr. Otto F. Claus, St. Louis; treasurer, S. A. Shephard, Boston; general secretary, Charles Casperi, Jr., Baltimore; reporter on the progress of pharmacy, C. Louis Diehl, Louisville, Ky.; council, Leo Eliel, South Bend, Ind.; George F. Payne, Atlanta, Ga.; E. G. Eberle, Dallas, Tex.

BRITISH MEDICAL ASSOCIATION.

The Seventy-first Annual Meeting, held at Swansea, July 28, 1903.

(By Our Special Representative.)

(Continued from page 512.)

On Wednesday and Thursday, July 29 and 30, the representative meeting considered the lengthy report of the council, which, as one item, reported the continued prosperity of the association. At the close of 1902, owing to deaths and arrears of subscriptions, the actual membership showed a certain shrinkage, but signs are not lacking to prove that the new constitution will tend to make the association a more powerful factor in the influencing of legislation for the good of the community and the profession at large, so much so that it is hoped the day is not far distant when every qualified practitioner will feel it imperative to seek membership in the association.

The Imperial Vaccination League.

The council, in view of possible legislation, realizes the great importance of guiding public opinion as to the absolute necessity of vaccination and revaccination, as the only means of stamping out the terrible scourge of smallpox, and has therefore voted the sum of $500 toward the funds of the league to further its campaign in this direction.

The Journal.

The *British Medical Journal* has continued to maintain its place among the leading medical journals of the world. The rapid progress of medicine and the more widespread interest yearly taken by members in clinical and scientific questions, making increasing calls on its space, had led the council from time to time to increase the number of pages in the weekly issue, and at the beginning of 1903 some further space was economically obtained by lengthening the columns, thus allowing more matter on each page. Special arrangements have been made also for the immediate publication of preliminary reports from the scientific workers whose researchers are assisted by the association, through its scientific grants committee. Such preliminary reports, while they will not interfere with the subsequent publication of full details in the most appropriate place, present the double advantage of affording an opportunity to the workers of establishing priority of observation, and to the members of the association of becoming promptly acquainted with the results of the latest scientific investigations and of learning the manner in which the money voted for the advancement of science is utilized.

Scientific Grants Committee.

This committee has made certain amendments of the provisions under which scholarships and grants are given. It is felt that in the future scholars should devote the whole of their time to the research work they undertake, and that scholars should not hold in addition any scholarship worth more than $250. Further, it is considered that the work both of scholars and grantees should be subject to periodical inspection, and that applicants for assistance should produce recommendations as to their fitness for undertaking any proposed research.

Special Chloroform Committee.

This committee has held six meetings since its reappointment. Further work has been carried out with the view of ascertaining the best means of estimating chloroform vapor in air, and reports on this subject have been received from Dr. A. D. Waller. The methods of estimating chloroform in liquids—for example, water, blood, etc.—were also tested, and Mr. A. Vernon Harcourt, F.R.S., presented a report on this matter. At the instance of Dr. Waller, Mr. Wells has investigated this subject by means of vacuum experiments.

Various inhalers for giving chloroform have been studied with the view of ascertaining the percentage dose in air of chloroform vapor delivered under known conditions. A report dealing with the purely practical question of the clinical use of such inhalers was presented by Dr. Dudley Buxton. The committee examined the actual use of certain inhalers, and will report on them.

The special chloroform committee was originally appointed in view of the very regrettable number of cases in which chloroform administration terminated fatally. The original terms of reference were as follows: "To investigate methods of quantitatively determining the presence of chloroform in the air and in the living body"; the ultimate object laid before the council of the British Medical Association by Sir Victor Horsley being to determine, if possible, what is the minimal dose of the drug which would secure an adequate anesthesia for operations, and at the same time not endanger life.

The committee is unanimously of the opinion that the effect of chloroform varies in proportion with the amount of chloroform in the mixture of air and chloroform administered, and with the rate and depth of respiration.

As regards individual differences, there is no doubt that different subjects present varying degrees of susceptibility to chloroform, as notoriously occurs in the case of alcohol; but the committee considers that the vague expression, "idiosyncrasy," ought not to be accepted in explanation of a fatal accident if the method of administration involves considerable fluctuations of the quantity of chloroform absorbed per unit of time.

A considerable amount of time has thus been devoted to the question of dosage, and it is believed that quantities of chloroform varying between 0.5 per cent. and 2 per cent. are sufficient for the induction and the maintenance of narcosis. It will be seen from Dr. Dudley Buxton's and Mr. Tyrrell's observations that for ordinary purposes about 1 per cent. of choloroform vapor is sufficient for maintenance of narcosis.

Any apparatus for continuous administration should afford means of quickly and easily augmenting and diminishing the proportion of chloroform in the mixture of chloroform and air inspired.

The committee continued its examination of the quantitative determination of chloroform in liquids. After trying various plans Mr. Harcourt found that the best results were obtained by using a saturated solution of urea in water, and mixing this with an equal volume of the blood, according to a plan suggested by Mr. Ramsden. By employing this method in two cases the blood remained fluid during the heating and more than 90 per cent. of the chloroform was accounted for.

SUMMARY OF INVESTIGATIONS INTO METHODS.

As regards most accurate methods for determination of the amount of chloroform in air and liquids the committee now is in a position to recommend the following as trustworthy:

(*a*) In air. (1) The combustion method by incandescent wire (Vernon Harcourt's method). (2) Combustion by magnesia or lime.

The committee also further considered the employment of Dr. Waller's oil absorption method and the determination of chloroform in air by the estimation of the density of the mixture.

(*b*) In liquids. Displacement of the chloroform from the liquid by heating it for several hours while air bubbles through and subsequent estimation of the chloroform vapor thus given off.

PROPOSED FURTHER INVESTIGATIONS.

The committee has postponed the estimation of chloroform in the solid tissues and to continue its endeavor to obtain an apparatus which shall deliver a known percentage of chloroform vapor. Further, the committee hopes to determine during the coming year the physiologic effects of the lower percentages.

Finally, by the same plan of research, it may be expected that the important question of accumulation or non-accumulation of chloroform in the tissues during constant chloroform absorption which is under investigation will receive elucidation.

Report of Committee on the Vaccination Acts.

The vaccination committee recommended the following:

1. That revaccination be made compulsory by law, and that it be performed between the ages of 10 and 13 years.
2. That both primary vaccination and revaccination be subject to the same provisions for conscientious objection as in the present vaccination act, but that the procedure for exemption should be more strictly defined in any future legislation.
3. That the vaccination act should be administered directly by a department of the local government board.
4. That in future vaccination legislation no certificate of successful vaccination should be accepted unless it contains a statement as to the number and area of the vesicles produced.
5. That all lymph shall be supplied by government, or by private establishments under government supervision and guarantee.
6. That every private practitioner furnishing vaccination authority with certificates of successful and efficient vaccination, satisfying a standard fixed by the local government board, should receive a suitable fee for each such certificate.

The question of vaccination and revaccination, as well as a compulsory act relating thereto, elicited considerable vigorous discussion in the representative meeting, the matter being finally referred back to the council.

We present herewith abstracts of some of the more important papers read before the various sections of the association.

In the surgical section an interesting paper was presented by Mr. G. H. Makins, London, entitled:

Practical Experience Regarding the Most Satisfactory Methods of Performing Intra-Abdominal Anastomosis.

The following is from the author's abstract of his paper:

A.—WHICH VARIETY OF ANASTOMOSIS IS THE SAFER AND TO BE GENERALLY PREFERRED?

(*a*) Axial (or end-to-end). Gives ideal result both from physiological or cosmetic point of view—one line of suture only with corresponding limitation of area of possible leakage nutrition—cicatricial contraction—diaphragm formation.

(*b*) Lateral anastomosis. Natural method—plane peritoneal surface obtainable; size of communication at the command of surgeon; no danger of diaphragm formation; may be made remote from field of operation.

Three lines of suture needed: risk of leakage from closed ends.

(*c*) Lateral implantation. No risk of diaphragm; two lines of suture only; iso-peristalsis assured.

RESULTS OF AXIAL AND LATERAL UNION RESPECTIVELY.

Axial. St. Thomas' statistics for all causes, 53 per cent. mortality. Littlewood, eleven enterectomies for carcinoma of large bowel, 27.27 per cent. mortality. One stitch failure in eleven.

Von Eiselsberg twelve resections for intussusception followed by axial ileo-colostomy, 25 per cent. mortality.

Lateral safer than axial; more suitable for large intestine; reasons. St. Thomas' recent statistics, 30.7 per cent. mortality.

Schloffer ileo-colostomy, ten cases, mortality 30 per cent. Ileo-colostomy with resection, eighteen cases, with 44 per cent. mortality. Roskoschny, thirty-four short circuit operations, 20.5 per cent. mortality. St. Thomas' resections for carcinoma of large bowel, twenty; axial, twelve, with 50 per cent. mortality and five fecal fistulæ; eight lateral unions, with 25 per cent. mortality. Fuchsig sixteen lateral anastomoses, with 37.5 per cent. mortality; twenty-four axial unions, with 54.16 per cent. mortality.

Gastro-enterostomy general mortality from all causes does not exceed 30 to 40 per cent., and stitch failures much fewer; thus, Schloffer, seventy cases, with no stitch failure; St. Thomas', forty-two cases, with two stitch failures; Mayo Robson, one hundred and three cases, with no stitch failure.

B.—GENERAL CONSIDERATION, AFFECTING ANY METHOD OF OPERATION.

Preliminary preparation; treatment of peritoneal cavity; temporary treatment of opened bowel, with the object of preventing infection; clamps; omental grafts; drainage; after-treatment.

C.—WHAT METHOD OF UNION SHOULD BE CHOSEN?

Requirements of any method of suture. Security; even coaptation of a sufficient peritoneal surface; rapidity in application; avoidance of the production of a diaphragm; protection as far as possible of the structures of the bowel wall itself from infection; the avoidance of any complete perforation of the bowel wall.

(*a*) Suture aided by some means of mechanical support. Mayo Robson's bobbin taken as a type.

(*b*) Coaptation by mechanical devices. Murphy's button taken as a type; advantages; objections to method. Results obtained by Dr. Murphy, 863 operations, with 261 deaths, a mortality of 30.24 per cent.

The author quoted a mass of statistics on all his points.

Vaccination Acts and Smallpox Prevention.

In the section on state medicine the chairman, Dr. John McVail, Glasgow, in his address discussed this subject. He pointed out that medical men had no final responsibility for the action or inaction of the government. Physicians have much less occasion than the public to worry over parliamentary delay in the prevention of smallpox. To medical men the value of vaccination was not a matter of opinion, but of knowledge. He urged that when smallpox threatened the country the local government board should have power to issue special regulations. A matter of great importance was that of the spread of disease by tramps, and it was a question whether in the case of tramps compulsory vaccination should not be made absolute, but at any rate if any regulations were enforced they should be applicable to all tramps in the suspected area, and should not merely apply to "contact" cases. The speaker expressed the view that it was quite possible that the legislature would refuse to exclude vagrants from the operation of the exemption clause. In such a case the only suggested alternative was that tramps should be compulsorily detained. He pleaded that the amplest powers of inspection should be allowed in regard to places infected by tramps, and also of tramps themselves. This, it might be urged, would be an interference with the liberty of the subject, but it would also be most useful in the detection of smallpox. The speaker urged that in cases of outbreak local sanitary authorities should have the fullest powers; at the same time they must not forget that the object of legislation was not to punish antivaccinators, but to promote vaccination. In conclusion he urged the importance of revaccination, and stated that the opponents of vaccination had been allowed to do far too much, while the solid body of opinion in the country that favored vaccination had done far too little.

DISCUSSION.

DR. DRYSDALE urged that medical men should do more to inculcate the doctrine that vaccination did prevent smallpox, and also that revaccination was undoubtedly necessary. In support of the latter the speaker pointed to Germany, where epidemics of smallpox were unknown—an immunity which was due to the fact that children were vaccinated in infancy and again before attaining the age of twelve. The speaker expressed the view that it would be a great advantage if such a custom became habitual in Great Britain.

Dr. Mole, Gower, said he thought the medical profession were agreed that four vaccination marks were more effective than a smaller number. Some mothers considered such a number too severe, and instead of going to a public vaccinator took their children to a private practitioner, who made one mark and perhaps charged one shilling for it. The speaker expressed the opinion that every private practitioner should be supplied with lymph free in the same way as public vaccinators.

Dr. T. Garrett Horder, Cardiff, urged that the powers now possessed by the boards of guardians should be transferred to the sanitary authorities. If this was done he felt convinced that it would tend to the juvenile population being more effectively protected against the ravages of smallpox. Everyone was aware that a large number of people escaped vaccination, and it was only in the event of an outbreak that these children were discovered. During the year 1901 5,206 births were registered in the borough of Cardiff, of which 503 children died unvaccinated, while of the remainder 3,597, or 76.1 per cent., were successfully vaccinated; 69 certificates of conscientious objections were granted, equal to 1.4 per cent. of births, and 933, or 19.7, were unaccounted for. Referring to the relation of the public vaccination officer to the private practitioner, he would like to point out that the public vaccinators had nothing to do with the framing either of the act or the local government board regulations. For his own part he had always advocated the system of making public vaccinators officials whose sole duty would be to look after the vaccination of the infants residing in the districts to which they are appointed. The speaker strongly urged that all children should be operated on before leaving school. The best and surest way of discovering unvaccinated children was to visit all schools periodically, and have the children's arms inspected. If after several visits it was found that a considerable number were not vaccinated a law should be made providing that no child should be admitted into an elementary school who had not been vaccinated. Any parent who refused to have his child vaccinated or to obtain a certificate of exemption ought to be prosecuted. In conclusion Dr. Horder hinted that private practitioners were apt sometimes to keep their lymph too long a time before making use of it.

Dr. Jones Morris, Portmadoc, gave some interesting facts regarding his experiences as a public vaccinator in North Wales, and complained of the way in which public vaccinators were often treated by the guardians. In his view, there was no need for the general practitioner to feel envious of the public vaccinator.

Dr. Ebenezer Davies, Swansea, referred to the recent smallpox outbreak in Swansea. There were some 200 cases, 33 of which proved fatal. They had not much difficulty in the town in regard to active opposition to revaccination, but during the outbreak they had a good deal of difficulty with regard to "contacts," concerning which they could not very well complain. The outbreak emphasized the need of revaccination of persons before they reached the wage-earning age. When they asked the "contacts" to be revaccinated they complained that they could not afford to risk being incapacitated from work by a bad arm. In conclusion the speaker stated that they had 14,000 people revaccinated in Swansea during the outbreak, and not one of these took the disease.

Dr. Morris, Neath, said he should like to see taken up the question of prevention of smallpox in connection with tramps and common lodging-houses. He thought that the time had come when the government should take more active measures in dealing with the tramp nuisance. They ought to have tramps under a system of passports.

REVACCINATION RESOLUTION.

Ultimately two resolutions were passed. The first, proposed by the chairman, pressed on the council the importance of bringing before members of parliament throughout the country, by means of local deputations and representations, the necessity of further legislation for vaccination and revaccination. The second resolution, proposed by Dr. Drysdale, was as follows:

> Considering that of late years there have occurred, in several cities of the United Kingdom, several epidemics of smallpox, while in Germany, since 1875, such epidemics have been unheard of on account of the fact that infants are vaccinated and that children are revaccinated before their twelfth year, this meeting is of opinion that all children should be vaccinated in infancy and revaccinated at the age of 10 or 12.

(To be continued.)

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Alkalies in Atony of the Stomach.

In this department, August 5, page 387, an outline of the treatment of hyperchlorhydria is quoted from A. A. Jones. We state: "He advises against the administration of alkalies before meals unless there is co-existing atony." A correspondent asks: "Suppose there is atony, what would be the good effects obtained by giving alkalies before meals?" We think our correspondent misconstrues Dr. Jones. We infer that Dr. Jones means simply that if atony exists, alkalies will do less or no harm. We do not understand that Dr. Jones advises alkalies even in atonic cases.

Hemorrhoids.

Preissman, in *Rev. Francaise de Med. et de Chir.*, recommends the following combination containing potassium iodid, glycerin and iodin in the treatment of hemorrhoids:

℞.	Pot. iodidi	gr. xxx	2	20
	Iodi (pure)	gr. iii		
	Glycerini	℥i	30	

M. Ft. solutio. Sig.: Thoroughly cleanse the parts and apply locally on absorbent cotton. The solution in some cases is applied in greater strength as follows:

℞.	Potass. iodidi	gr. lxxv	5
	Iodi (pure)	gr. xv-ʒss	1.-2
	Glycerini	℥i	30

M. Sig.: Apply locally.

Acute X-Ray Burns.

Burns produced by the *x*-ray are becoming more and more a grave subject for consideration, as the numbers increase, both on account of the severity of the burns in some cases and the stubbornness to treatment even in the mild cases. Even those who have become most familiar with the *x*-ray have sustained such severe burns as to disfigure them for life.

M. F. Engman, in *Inter-State Med Jour.*, has had occasion to treat several cases of this character, all of which were of the second degree or milder. Infection and ulceration were not present, the chief indications for treatment being the severe itching, to assist repair and to keep the surface aseptic. The following combination was used by him as a dressing, which seemed to be admirably suited to the cases:

℞.	Acidi borici	℥iss	45
	Zinci oxidi		
	Amyli		
	Bismuthi subnit.		
	Olei olivæ, āā	℥i	30
	Aquæ calcis		
	Lanolini, āā	℥iii	90
	Aquæ rosæ	℥iss	45

M. Sig.: Apply locally to the affected areas on gauze.

The powder should be rubbed up in a mortar with the lanolin. The olive oil and lime water are well mixed and slowly added to the bismuth and lanolin mixture. The rose water should be added last and a creamy paste is the result. One or 2 per cent. of carbolic acid may be added if the pruritus is excessive.

It should be applied on several thicknesses of gauze over which a sheet of gutta percha is placed to prevent evaporation. This paste is cooling to the parts on account of the amount of water present.

Round Worms (Ascarides).

The following outline of treatment is recommended by Pollard in *Med. Record* in the removal of round worms:

R.	Olei chenop. anthel.	ʒi	4	
	Ext. spigeliæ et sennæ flu.	℥ss	15	
	Santonini	gr. viii		50
	Pulv. acaciæ	ʒi	4	
	Syr. rhei arom.	℥i	30	

M. Sig.: Shake and take one teaspoonful an hour before each meal. After the last dose the following should be taken:

℞.	Olei terebinthinæ	gtt. x		65
	Olei ricini	℥ss	15	

M. Sig.: To be taken at one dose.

To children four or five years of age the following combinations are of service in the removal of round worms:

℞.	Ext. spigeliæ flu.			
	Ext. sennæ flu.			
	Syr. simplicis, āā	℥ss	15	

M. Sig.: One teaspoonful night and morning; or:

℞.	Ext. spigeliæ flu.	℥ss	15	
	Santonini	gr. v		30
	Ext. sennæ flu.	℥ss	15	

M. Sig.: One teaspoonful twice a day; or:

	Hydrarg. chloridi mitis	gr. iss		09
	Santonini	gr. ii		12
	Sacchari lactis	gr. xv	1	

M. Ft. chartula. Sig.: To be given in honey, at one dose to a child three years old or over.

The following combination is sometimes recommended in the form of an enema in the treatment of ascarides:

℞.	Olei cajuputi	m. xx	1	30
	Magnesiæ levis	gr. x		65
	Mucilaginis	ʒiv	15	

M. Sig.: At one dose in the form of an enema; or:

℞.	Liquoris calcis	℥iv	120	
	Decoct. altheaæ	℥i	30	

M. Sig.: As an enema.

Dipsomania.

The following combination is recommended by Mann in *Med. Record* in the treatment of dipsomania:

℞.	Quininæ sulph.			
	Zinci oxidi, āā	gr. ii		12
	Strych. sulph.	gr. 1/40		0015
	Acidi arsenosi	gr. 1/100		0006
	Pulv. capsici	gr. ii		12

M. Ft. pilula No. i. Sig.: One such pill three times a day.

Copper Arsenite in Enteric Diseases.

Haslam, according to an abstract in *St. Louis Courier of Med*,. ascribes beneficial qualities to the arsenite of copper in diseases of the intestinal tract. He recommends it in typhoid fever, giving it in doses of gr. 1/100 (.0006) every hour. He believes, by the administration of this preparation, that the tongue and mouth show improvement, and that the disease is shortened a few days.

In the ordinary diarrheas he advises the following combination:

℞.	Cup. arseniti	gr. 1/100		0006
	Acidi tannici	gr. 1/20		003
	Pulv. opii	gr. 1/40		0015
	Pulv. camphoræ	1/40		0015
	Pulv. cretæ comp.	gr. i		06

M. Ft. capsula No. i. Sig.: One such every three or four hours.

Painful Menstruation.

W. L. Downing, in *Med. Fortnightly*, dwells at length on the pathology and symptoms of disturbed and painful menstruation. Dysmenorrhea, according to the author, may be due either to a neuralgia of the uterus or ovaries, or may be brought about by some mechanical obstruction due to flexion or version of the uterus.

In the neuralgic variety due to uterine irritability cimicifuga is said to produce the most excellent results and to give speedy relief, given as follows:

℞.	Tincturæ cimicifugæ	℥i	30	

Sig.: Ten to thirty drops in hot water every hour until relieved; then every three or four hours.

If the pain is due to ovarian irritability pulsatilla is recommended, given in five-drop doses, in hot water, every hour until relieved. These preparations may be begun one or two days previous to the usual time for menstruation.

If mechanical obstruction is the cause due to pathologic changes, preparations must be used, which are anodyne, sedative and antispasmodic in character. In these cases he recommends viburnum prunifolium given in hot water before meals, a few days previous to the attack and administered as often as every hour during the attack. This preparation should be continued three times a day for several weeks.

The bowels must be well regulated by the aid of saline laxatives or a combination of podophyllin and leptandrin, of each gr. 1/4 (.015), is recommended.

Glycerin vaginal tampons applied twice or three times a week are of value in relieving the pelvic congestion and giving comfort to the patient.

A combination containing 10 to 20 per cent. of ichthyol in glycerin is of even greater service applied locally on tampon. He also emphasizes the importance of the vaginal douche in relieving the soreness and tenderness due to cervical ulceration, endometritis, metritis, ovaritis, etc. Two or three gallons of water as hot as can be borne by the patient should be used at night and continued for a considerable length of time. Cervical dilatation must be resorted to, previous to menstruation if narrowing of the internal os be present, and flexions corrected, if possible, when present as a causative factor, by proper supports. If polypi block up the outlet from the uterus, dilatation must be carried out and the polypus snared off.

Furuncle.

The employment of a solution of iodin in acetone is recommended by Gallois and Courcon in *Bul. Gen. de Ther.*, in the abortive treatment of furuncles. Acetone, it is said, will hold three or four times as much iodin in solution as will alcohol, and consequently is more effective. The following combination is used:

℞.	Iodi (metallic)	ʒi	4	
	Acetone	ʒiiss	10	

M. Ft. solutio. Sig.: Paint the affected area once or twice daily.

In many cases, it is asserted, boils may be aborted by applying the solution early.

Empyroform in Diseases of the Skin.

This preparation, which is a combination of tar and formaldehyd has been used successfully by Neisser, according to the *Ther. de Gegenwart*, in the treatment of the different forms of eczema. It may be used in the form of a paste in five, ten, twenty or fifty per cent. strength combined with zinc or lanolin. The following formula has also been recommended:

℞.	Empyroform	℥ss	15	
	Talci venet.			
	Glycerini			
	Aqùa destil.			
	Spts. vini, āā	ʒiiss	10	

M. Sig.: Shake well and apply locally to the affected parts.

In the form of a tincture, it may be used as follows:

℞.	Empyroform	ʒi-iiss	4.-10	
	Spts. chloroformi			
	Tinct. benzoini, āā	℥iss	45	

M. Sig.: To be painted over the affected areas.

This preparation is said to possess advantages over the ordinary tar preparations in that it is very grateful to the patient. no irritative symptoms arise, no systemic symptoms of intoxication are present. It is a powerful antipruritic and is odorless. The advantages of this new combination over the ordinary tar preparations are supposed to be due in a great measure to the formaldehyd present.

Medicolegal.

Care Required in Removal of Pauper in Distress.—The Supreme Judicial Court of Maine holds, in the case of Merrill vs. Bassett, that the care to be used in removing a person in distress from one town to another under the pauper law is that care and prudence which a reasonably careful and prudent man would exercise under the circumstances of a like situation. The test by which to determine whether due care and prudence have been exercised by one charged with the duty of removal of a person in distress from one town to another, in ascertaining the ability of the pauper to bear the strain of the journey, is the means employed and effort made to find out, rather than the actual physical condition itself. A day affording proper weather conditions should be selected; the pauper should be furnished with suitable garments to protect her, considering as well her physical condition as also the state of the weather; and suitable conveyance, in a careful and prudent manner, should be provided.

Liability of Railroad in Association for Services.—The Supreme Court of Florida, Division B, holds, in Florida Southern Railroad Company vs. Steen, that, where railroad companies owning and operating their several roads enter into a voluntary association, and a hospital and relief department is formed by the association for the several companies, and such department is operated in connection with the business of each company—employes of each company being required to be members of such department, and to contribute regularly to such department sums deducted from their wages by the company for the privilege of such membership—one of such companies is responsible for the compensation of a physician employed by its employes, in pursuance of the regulations of the department, to treat another employe injured by an explosion in the shops of such company. But a physician employed, in pursuance of the authority conferred by the regulations of the relief and hospital department of a railroad company, to treat an injured employe in an emergency, where the company's surgeon could not be reached, who was employed for no definite period of time, can not recover for services rendered after being notified that his services were no longer needed, as the hospital surgeons were then ready to take charge of the case and properly treat the patient in the company's hospital.

Admissibility of Non-Expert Opinions On Sanity.—In Queenan vs. Territory of Oklahoma, where a non-expert witness, a lawyer who knew the prisoner, charged with murder, quite well, it was ruled, could not state an opinion formed after the killing as to his mental condition at that time, but might state any condition that existed when he saw the prisoner on the day before the killing or any impression that it made on his mind as to the prisoner's condition, the Supreme Court of the United States says that some states exclude such opinions, even when formed at the time. But it is impossible for a witness to reproduce all the minute details which he saw and heard, and most witnesses make but a meager and halting effort. Therefore, in this, as in many other instances, after stating such particulars as he can remember—generally only the more striking facts—an ordinary witness is permitted to sum up the total remembered and unremembered impressions of the senses by stating the opinion which they produced. To allow less may deprive a party of important and valuable evidence that can be got at in no other way. But, on the other hand, to allow more, to let a witness who is not an expert state an opinion on sanity which he has formed after the event, when a case has arisen and become a matter of public discussion, must be justified, if at all, on other grounds. It is unnecessary to lay down the rule that it never can be done, for instance, when the opinion clearly appears to sum up a series of impressions received at different times. It is enough to say that, at least, it should be done with caution and not without special reasons.

Employment by County Physician of Other Physician.—Article 4339 of the Revised Statutes of Texas of 1895 makes it the duty of a county physician to establish, maintain and enforce local quarantine for his county whenever declared by proclamation of the commissioners' court; to furnish supplies, select medical assistants, guards and perform all other duties coincident to a reasonable, economic and consistent quarantine. Article 4340 provides that whenever the commissioners' court of any county has reason to believe that they are threatened with the introduction or dissemination of a dangerous, contagious or infectious disease that can and shall be guarded against by quarantine, they may direct their county physician to declare and maintain said quarantine; to establish, maintain and supply stations or camps for those held in quarantine; to provide hospitals, tents or pest-houses for those sick of contagious and infectious disease; to furnish provisions, medicine and all other things absolutely essential for the comfort of the well and the convalescence of the sick. The county physician shall keep an itemized account of all lawful expenses incurred by local quarantine and his county shall assume and pay them as other claims against the county are paid. But, in the case of Barrett vs. Hill County, an action brought by a physician to recover for services rendered to certain smallpox patients under an alleged employment for the purpose by the county physician, the Court of Civil Appeals of Texas holds that the county physician had no authority to make a contract binding on the county, unless the commissioners' court had declared quarantine. It says that the articles mentioned clearly indicate the purpose not to authorize the county physician to incur liability on behalf of the county in such cases except when quarantine has been declared by the commissioners' court. This limitation on his authority was doubtless prompted by a desire to guard the county against extravagance in these epidemics, which, at best, are expensive enough; and to place all expenditures under the supervision of the commissioners' court.

Classification of Physicians—Right to Practice.—District Judge Bryant, delivering the opinion of the United States Circuit Court in the case of August Busch & Co. vs. Webb and others, says that the question to be determined was, can a state take away from a physician his right to practice his profession because he has some other business than that of medicine? He says that he recognizes the right of the legislature to classify physicians, provided the classification is based on sound public policy, and is a reasonable classification. To illustrate: It would be competent for the legislature to say that no physician who has been convicted of a crime should be allowed to practice his profession, or to pass any other reasonable regulation, although, apparently, it might discriminate against persons in the same class or profession. But the judge says that he apprehends that, wherever such classification is made it must be made on the ground of public policy, and for a reason that would attach to the party thus excluded either moral turpitude or incompetency. Where such classification is attempted, and for such reasons, the court will uphold it. But is it true that the legislature can arbitrarily deprive any citizen of his right to pursue his chosen profession, and to its fullest extent, where the discrimination is made solely because he is engaged in some other lawful business which in no wise attaches to him unfitness to practice his profession or moral turpitude? The physician's calling is one that requires long preparation and scientific information not possessed by people generally, entailing on him much expense and years of close study to qualify himself to properly perform his duties as a physician. His calling is of that nature, being one of confidence. He obtains the secrets of his patients as to physical ailments, of whatever character they may be, and therefore the legislature has the power, on grounds of public policy, to guard strenuously the individuals that are allowed to practice medicine, and they have the right to classify and discriminate for good cause, but that does not carry with it the power of arbitrarily discriminating against any member of the medical profession, unless, as so often stated, it is for incompetency or moral turpitude, which public policy requires should be enforced. Here, there was a graduate of a medical school, whose main business was that of postmaster, though he still practiced his profession as a physician, who averred that in such practice, in some cases, it was necessary that his patients should be supplied with alcoholic stimulants. And as applied to these facts, the court holds unconstitutional and void that portion of the local option law, Article 3385 of the Revised Statutes of Texas of 1895, which reads: "Provided, that a physician who does not follow the profession of medicine as his principal and usual calling shall not be authorized to give the prescription provided for in this article."

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal.

August 13.

1 *The Present Status of the Surgery of the Prostate Gland. Paul Thorndike.
2 *Preliminary Report of Five Cases of Renal Decapsulation. J. Bapst Blake.
3 *Rupture of the Quadriceps Extensor Femoris Muscle. Halbert G. Stetson.
4 Report of a Case of Aphasia as a Complication of Measles. Warren R. Gilman.

1. **Surgery of the Prostate.**—Thorndike reviews the operations and concludes that no patient should be allowed to suffer for lack of proper treatment. If there is still a place for the catheter many patients can be made comfortable and kept so by its systematic proper use. But all who can not be thus relieved are fit subjects for operation. The time for operation is as soon as the inadequacy of palliative treatment is shown. The operation of choice is always prostatectomy, but only in persons whose general condition make them fit surgical risks. That is rare after 65 years of age. For all others the Bottini operation can be offered as one attended with little risk to life, short convalescence and a good prospect of such a degree of improvement as will obviate the further use of the catheter.

2. **Renal Decapsulation.**—Five cases operated on by Edebohls' method are reported by Blake, who describes his technic and the method of operating. Two of the cases are practically well, though only some months have elapsed since the operation. Two died respectively in six days and six months after the operation, the latter from tuberculosis of the kidney and general tuberculosis, the former from shock and failure to recover from the operation, for which he was in bad shape. One patient has apparently not improved. In the two cases that are apparently cured, traces of albumin and casts are still found. He thinks if the patients would abstain from alcohol entirely it might be followed by the disappearance of albumin and casts in the urine. In other respects they feel as well as ever, and are following their usual occupations.

3. **Rupture of the Quadriceps Extensor Femoris Muscle.**—This accident is considered rare by Stetson, but still it is likely to occur. He thinks the diagnosis should not be difficult if seen early. If rupture is only partial the tendency is toward recovery under mechanical treatment. If complete the operative method would seem to be preferable, other things being equal. The operation consists in cutting down on the separated ends and uniting them either with silkworm gut, kangaroo tendon or silver wire. If the rupture is too close to the patella for suturing the tendon, the upper portion of the tendon should be sutured to the bone itself. He quotes Walker's conclusions that where the joint is apparently not opened and there is not much effusion and the separated ends can be brought together, mechanical means may be favorably considered and ought to bring about a recovery in most cases in from nine to twelve months. Aseptic surgery in suitable cases, however, considering the age and vitality of the patient, may produce better results. Where the separation is greater than one and one-half inches or mechanical treatment has failed, operation is indicated. The element of time in the operative method is an important consideration. A case is reported.

American Medicine, Philadelphia.

August 15.

5 *Rubella. Frederick H. Dillingham.
6 *Enteroptosis: Its Etiology, Symptomatology, Treatment and Prognosis. (To be continued.) Thomas R. Brown.
7 A New Cholera Vaccine and Its Method of Preparation. Richard P. Strong.
8 *What is Epilepsy? J. W. Wherry.
9 *Treatment of Tetanus by Means of Subcutaneous Injections of Carbolic Acid—Baccelli's Method—with a Review of Seventy-five Cases from the Literature. Douglas Symmers.
10 Congenital Cystic Kidney. Walter E. Tobie.

5. **Rubella.**—Dillingham's paper is largely a discussion of the diagnosis of rubella, which he says is sometimes very difficult as regards measles, though not so much so with other diseases.

6. **Enteroptosis.**—Brown gives the history of the subject, the anatomic conditions and the literature as regards theories. He specially notices Keith's contribution in the *Lancet* of March 7 and 14, 1903, and his idea of the relation of enteroptosis to the respiratory function. He roughly classes the theories into three groups, as follows:

> 1. The condition is congenital and is due to an inherent weakness of the tissues which support the abdominal viscera; such factors as clothing, trauma, disease, etc., are not the primary causes of the condition, but simply contributory causes, which bring out and accentuate the inherited tendency; 2, the condition is due to the pressure of clothing, trauma, weakness of abdominal walls, various diseases associated with marked loss of strength or weight, various spinal and thoracic diseases, pregnancy, and parturition, abdominal tumors of various kinds; in other words, a number of conditions, each of which, however, has as its results the weakening of the various visceral supports, due in some cases to pressure, in other cases to adhesions, in other cases to trauma, and in still other cases to a marked diminution in the supporting power of the abdominal walls; 3, that each of the foregoing may be the primary causes of the condition; in other words, that there is both an acquired and a congenital form of enteroptosis. A careful consideration of the various theories evolved and of the cases of enteroptosis described in the literature and met in our own experience should, I think, make us take this third view. As to the exact way in which the ptosis is produced there are a number of possibilities, but the suggestions of Keith in this connection—that is, that the diaphragm is the most important factor in the production of this condition—should receive most careful consideration.

8. **Epilepsy.**—Wherry remarks that epilepsy is a condition of autointoxication spasm resulting in autoasphyxia. It is the result of a vasomotor spasm causing asphyxia of the brain, and so far as the symptom of epilepsy is concerned, is the same as convulsions occurring in asphyxia from other causes, as in hanging. He says epilepsy is a state of autoasphyxiation from a condition of physiologic strangulation or suffocation, except that the cause manifests itself through obstruction to circulation rather than to respiration. The ultimate effect in both cases is depriving the brain of oxygen. He calls this the explanation of epilepsy shorn of all mystery.

9. **Tetanus.**—Baccelli's method of the treatment of tetanus by subcutaneous injections of carbolic acid is taken up by Symmers, who gives to a large extent the history of the treatment of this disorder by this method, reviewing 75 cases. He says that in all suspicious cases and wherever the bacillus of tetanus is known to exist, the areas should be excised or the extremity amputated; if this is impracticable the wound should be cleansed of all foreign substances and saturated with oxygen by means of hydrogen dioxid or the injection of pure oxygen gas; following which it should be flushed with boric acid or saline solution, followed in turn by potassium permanganate or a 5 per cent. solution of iodin trichlorid. No matter what local treatment is employed, if the wound affects an extremity, care should be used in applying permanent carbolic dressings lest gangrene develop. In establishing drainage moist iodin gauze should be employed whenever expedient. Impermeable dressings, dusting powders and caustics should never be used and such wounds should never be incised. A subcutaneous injection of antitetanus serum should be given in every case where development of tetanus is more than a remote possibility. The use of blank cartridges, firecrackers and similar creations should be more stringently regulated. In addition to the general management of the case, the patient should receive subcutaneous injections of carbolic acid along the tracks of the great nerve trunks, the injections being commenced as soon as the diagnosis is made. The body should be further fortified by the administration of the acid by the

compress as hot as can be borne. No massage should be allowed early in the disease. For the pain morphin in some form is at times indispensable; when not so severe, other drugs may be substituted. The bowels should be kept open by salines. Cardiac tonics are often indicated. When the subjective symptoms have ameliorated measures should be taken to remove the semi-solid matter from the tissues. Gentle massage and the use of dry hot-air as early as possible, which is, he thinks, one of the best measures of all. Potassium iodid or protoiodid of mercury is to be given for weeks and months. Calomel in small doses is also of advantage.

21. **Chronic Gastritis.**—McCaskey has studied the conditions as to the acidity in this disorder, and thinks that it is possible that primary hyperchlorhydria may play an etiologic rôle in its production. He does not think the condition can be excluded in the diagnosis on the ground of increased HCl. He finds that a slight majority of his patients are males and between 20 and 40 years of age. Nearly one-half the cases are farmers and housewives, about 72 per cent. follow indoor occupations, but the majority of them active ones. He calls attention to the frequent latency of the disease and to the defective motor power of the stomach, which he thinks plays an important part in the disorder. The treatment consists in careful attention to nutrition, which is generally below par, elimination, moderate gymnastics, deep breathing, hydrotherapy, general faradism, etc. Of local treatments, lavage is the simplest and most abused of all the methods. It is only advisable when there is a considerable amount of mucus or other debris. Electricity is of great help, and he would use faradism with intragastric electrodes. Another method of great value is the use of finely divided medicaments, using the Einhorn apparatus for concentrated drugs and Turck's nebulizer for the milder applications. He has also found Turck's gyromele, as lately modified by the inventor, of much value. Electric vibratory massage applied over the stomach, which may be distended with air, is also of advantage. Care should be taken against over-treatment and careful individual treatment applied in every case.

Medical Record, New York.

August 15.

23 *Consideration of Mammary Cysts in the Differentiation of Breast Tumors. Robert Abbe.
24 *Prostatic Hypertrophy and Its Radical Cure. William P. Herrick.
25 *The Causation of Cancer and Its Treatment without Operation. Robert Bell.
26 *Pathology and Treatment of Pneumonia. John North.
27 The Principle of Life and Cognate Things. Joseph Clements.
28 An Unusual Case of Empyema of the Antrum of Highmore. Sidney Yankauer.

23. **Mammary Cysts.**—Abbe holds that mammary cysts are much more common than is generally thought. They are frequently diagnosed as malignant, and treatment by extirpation recommended, when it is unnecessary, on the ground that if not malignant the gland is likely to become so. Formerly he himself considered them as degenerative, but of late years it has been his custom to test the nature of the tumor by aspiration before making an absolute diagnosis. Reviewing his private practice in eight years he has seen 41 cases of mammary cyst and 56 of scirrhous tumors, besides a number of innocent inflammatory adenomas, and he thinks this is not far from the average surgical experience. Two points have impressed him in this series of cases: 1. The differential diagnosis, which can be said to be easy and absolute, and 2, the cure, which can also be said to be easy and absolute. He calls attention to the deceptive hardness, which renders it impossible sometimes to determine the cystic character of the tumor without exploratory aspiration. When the tumor is found to be cystic, the withdrawal of fluid in the great majority of cases seems to be sufficient for a cure. In only 2 of his 41 cases was the cyst refilled and secondary aspiration required. He thinks it is the duty of every surgeon to test the nature of each doubtful hard tumor with an aspirating needle thrust quickly into its very center, sterilizing the skin by a moment's friction with alcohol. The results in satisfaction to the patient and practitioner, he thinks, will be all that can be desired.

24. **Prostatic Hypertrophy.**—The various methods of operating on an enlarged prostate are reviewed by Herrick, who describes the methods and discusses their merits. In conclusion he says:

1. These cases must be judged more or less individually.
2. When chronic posterior urethritis and prostatitis exist, these should receive appropriate treatment, the catheter used to withdraw residual urine, and the result carefully watched.
3. In patients in whom operation has become too hazardous, we must endeavor to improve their general condition, and, if necessary, do aspiration or perineal cystotomy under cocain, endeavoring to prepare them for radical operation or alleviate their symptoms. Advanced arteriosclerosis should also be carefully considered.
4. Our responsibility is in recognizing and properly urging operation when indicated; if it is refused we have done our duty, and the patient must abide the issue with such means as remain.
5. Palliative operations should rarely or never be done from their hazardousness and inefficiency.
6. Prostatic hypertrophy is now curable by means of an operation which, though serious, is not hazardous when undertaken in proper time and manner. Failure of palliative treatment, of course, gives hope alone through operation, but should be anticipated rather than persisted in. In general infection, especially if repeated, as in irritable cases, obstructive cases unless promptly relieved by its sound and under observation, if residual urine is increasing despite catheterization, or the patient's general health is being impaired, all indicate the time for operation.
7. Anatomically, and now surgically, the simple perineal is the direct and preferable route. Rarely suprapubic exploration or lithotomy may be advantageously added to it.
8. As statistics accumulate, we believe that radical cure may further anticipate the course of the disease.

25. **Cancer.**—Bell holds that cancer, or the elements of cancer, are present in every normal individual. The cancer entity is in its original state a normal cell, which from circumstances is altered in character and assumes a new rôle of existence, losing its benign attributes, becoming aggressive and cannibalistic, preying on its neighbors. He draws attention to the fact that epithelioma invariably retains its epithelial character, and, under conditions of enfeebled general health, may take on a malignant form, though often innocent in its first beginnings. The importance of the thyroid body to the epithelial elements is mentioned. His theory of cancer is that intestinal toxins affect this organ, disturb the balance of nutrition and set up a morbid process. He sums up the treatment in the administration of thyroid gland, supplemented by measures to destroy the saccharomycetes in the intestinal tract, which are almost invariably present in cancerous subjects, and to prevent the perpetuation of their effects on the enterotoxins. In conjunction with thyroid extract it is, therefore, advisable to administer the salicylates in one form or another, and also to relieve constipation. The diet should be modified so as to be composed largely of milk food, thyroid extract administered in 5-grain doses three times a day, and along with this, 10 to 15 grains of salicylate of sodium, and local applications used to remove all sources of irritation. If the disease has not advanced too far he thinks the condition will yield to this treatment. In conclusion he sums up the predisposing causes of cancer in the following:

1. Persistent and prolonged retention of feces containing an undue proportion of decomposing albuminous material, from which enterotoxins are derived, and by absorption conveyed to the blood.
2. The blood thus contaminated produces a depraved condition of the nervous apparatus, thereby handicapping the functional activity of the various organs, interfering with cell metabolism, and eventually culminating in anemia in young persons, or cachexia in the elder.
3. If the functions of the thyroid gland are at fault, these toxins, which otherwise would be neutralized, remain in a position capable of producing serious mischief.
4. If saccharomycetes are present in the blood, this toxic material is liable to undergo chemical changes, resulting in the formation of uric acid, when uricacidemia will result.
5. The presence of these toxins in the blood, alone or combined with uric acid, exerts a pernicious influence on cellular structures, and confers on them a predisposition to take on a malignant metamorphosis.
6. Prolonged or repeated irritation of a part is liable to rouse into malignant activity cells which otherwise would have remained dormant.
7. The vitiated condition of the blood by prostrating the physiological vitality of the various organs and cellular structures and paralyzing the *vis medicatrix naturæ* affords every facility for the new growth to establish its identity and increase its area at the expense of its environment.

26. **Pneumonia.**—North holds that our great death rate in pneumonia is due to the antiphlogistic treatment of the disease. Pneumonia is not properly an inflammation, and should not be treated as such. A light nutritious diet, and the use of quinin in 2-grain doses every two hours in the beginning to diminish leucocytosis may abort the disease if begun

promptly in full dose at the beginning. He would also use ammonium chlorid and aconite in minute doses, which is of great value. Opium or its derivatives is also used throughout the disease. He prefers svapnia to other forms, given in 1/10-grain doses every two hours, stimulating the respiratory center and acting as an expectorant. Large doses should never be given. Heroin in 1/12 grain doses is sometimes very valuable. Alcohol, strychnin, nitroglycerin, digitalis, veratrum, salicylates, creosote, derivatives, saline injections, etc., are all useful in pneumonia if used in the proper stage or to combat complications as they arise. Warm applications, cold packs and cold sponging are called for in almost every case, depending on conditions and circumstances.

Cincinnati Lancet-Clinic.

August 15.

29 *The Relation and Co-relation of Gynecologic and Nervous Affections. Chauncey D. Palmer.
30 Deafness and Results. E. L. Mather.
31 *Mercurial Injections in Syphilis. William F. Bernart.
32 Surgery of Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued.) B. Merrill Ricketts.

29.—See abstract in The Journal, xl, p. 1529.

31. **Syphilis.**—Bernart advocates the method of mercurial hypodermic injection in syphilis on account of its accuracy, the conciseness with which the therapeutic and physiologic lines can be drawn, the absence of gastric and kidney troubles, the rapidity of its action and its practical painlessness. The objections to it have been the alleged occasional fatality, the production of irritation and the necessity of its being carried out under the direction of a physician. The first two of these he considers of small importance and as likely to be raised against any method of treatment whatever. The fact that it requires the close personal attention of a physician is, in his opinion, one of its strongest recommendations. The alleged painfulness is, he thinks, under proper use absent. The preparation which he recommends and which he finds most useful is the following:

Mercuric chlorid	.50	(7 7/10 grs.)
Sodium chlorid	.25	(3 4/5 grs.)
Boiling distilled water	25.00	(6 1/4 drs.)
When cool add:		
Carbolic acid	.15	(2 1/10 grs.)

Of this 1 min. equals 1/50 gr. of mercuric chlorid, 1/100 gr. of sodium chlorid, and 1/160 gr. of carbolic acid. It can be given as high as 20 min., but usually 5 min., given daily, will give sufficiently rapid results. The carbolic acid readily controls the pain, and in a 5 min. injection the patient only receives 1/32 gr.

In choosing the site of the injection the post-trochanteric, he thinks, is most desirable. Several cases are reported.

St. Louis Medical Review.

August 15.

33 Personal Experience in the Treatment of Typhoid Fever. George R. Highsmith.

Therapeutic Gazette, Detroit.

July 15.

34 *Remarks on the Treatment of Paralysis Agitans (Parkinson's disease). J. Madison Taylor.
35 A Case of Large Aortic Aneurism Treated by the Introduction of Gold Wire and Electrolysis, Followed by Cerebral Embolism; Recovery. Julius L. Salinger.
36 The Therapeutic Uses of the Preparations of Benzoin. H. R. Coston.
37 *Cow's Milk Kumyss as a Nutrient in Disease. E. F. Brush.
38 Summer Complaints of Children. Samuel A. Visanska.
39 *Conservative Treatment of the Antrum of Highmore. Preston M. Hickey.
40 Poisoning by Camphor; History of Case; Recovery. Charles Stanley White.
41 *A Pharmacological Study of an Aseptic Preparation of Ergot Devised for Hypodermic and Internal Administration. E. M. Houghton.

34. **Paralysis Agitans.**—The treatment of paralysis agitans as suggested by Taylor is the use of carefully directed movements, passive and active, to overcome contractures and loosen the joints, education in voluntary movements, almost solely of the extensors in the arms and the flexors in the legs, but not neglecting other muscles. These should be instituted gradually. Great attention should be paid to the hands and feet. He sums up his treatment in that it consists in trying to overcome the growing apathy; to induce systematized return to normal activities; to use all gentle and yet forceful means to secure elasticity to the tissues, and finally, to stimulate the circulation in the spinal cord by graduated pressure on the spinal areas, thus restoring reflexly many of the fibers of the cord to function and improving others. Care and persistence on the part of the physician and the co-operation of the patient are essential. He does not prophesy a cure in these cases, but great improvement has been obtained in some very severe cases, warranting the hope that still better results can be obtained.

37. **Kumyss.**—Brush finds kumyss of special value in diseases of the digestive organs, such as catarrh, chronic diarrhea and in many cases of dyspepsia. It is the most grateful and useful food in continued fevers and in the convalescence from typhoid and pneumonia. In consumption it is invaluable, especially in the beginning stages. It is useful in chlorosis, anemia and prolonged lactation and all conditions of defective nutrition. He quotes the experience of other physicians as to its value in summer complaint of children and badly nourished cases. It is particularly useful in alcoholism and delirium tremens. The dose varies. The amount for the adult is the largest that can be taken without discomfort. In continued fevers the dose should be all that the patient requires for nourishment and to quench thirst. For infants the dose is correspondingly small, in some cases beginning with a teaspoonful.

39. **Antral Disease.**—Two cases are reported by Hickey, who offers the following conclusions: 1. Acute inflammation of the antrum when due to nasal infection should be treated conservatively for the first two weeks. 2. The constringing effect of adrenalin offers us a valuable and non-toxic agent in reducing swelling about the hiatus semilunaris. 3. When severe symptoms occur the proper position for favorable drainage from the natural outlet should be insisted on.

41. **Ergot.**—Houghton reports experiments made with ergot resulting in a new preparation which was made to obtain in solution as large a percentage of the sphacelinic acid and cornutin and other constituents of this type and rejecting as large an amount of the irritating and depressing principles as possible. This was produced by percolating through various media and throwing out by proper precipitants the undesirable constituents, checking the process by testing the filtrates and precipitates, giving them to roosters, observing the blackening of combs, etc., and the amount of irritation by hypodermic injections in guinea-pigs and studying the abortifacient effect on pregnant animals. The resulting product was a clear, transparent, light amber fluid representing one part by weight of the crude drug; of the same strength as the U. S. P. fluid extract. To act as a preservative a small quantity of chloretone was added, also for its local anesthetic properties. The substance thus produced is called ergone. He thinks it possesses the great advantage of being less toxic than the pharmacopeial preparation of ergot or Bonjean's extract. It is aseptic, non-irritating when given internally or subcutaneously, and physiologically active, at the same time being less toxic. Further clinical trial will be required to show its therapeutic value.

Canadian Journal of Medicine and Surgery, Toronto.

August.

42 *The Treatment of Chronic Empyema. A. Primrose.
43 A Case of Tubercular Laryngeal Stenosis Treated by Tracheotomy. J. Price-Brown.
44 The X-Ray in Sarcoma, with Case. Charles R. Dickson.

42. **Chronic Empyema.**—Primrose reports cases treated by drainage and insists on the importance of this being as efficient as possible if much is to be gained by the procedure. He has not much faith in irrigation, and believes that it is liable to be dangerous. Many cases will be carried to a successful issue if drainage is maintained. He advises whenever pus is discovered in the pleural cavity to get rid of it in the early stage of the trouble by free drainage. Where this has had a fair trial and cure is not effected, Schede's operation of thorax resection should be undertaken if the general condition of the patient warrants it.

New Yorker Medicinische Monatschrift.

June.

45 *Typhus Abdominalis and Trinkwasser. A. Seibert.

45. **Water Supplies and Typhoid.**—Seibert's article is a study of the effect of filtration of water supplies on the occurrence of typhoid in various cities, which he illustrates by the graphic method in a very striking way. Especially is this marked in the case of some German cities like Hamburg, Hanover, Berlin and Breslau, where the sudden drop in the ratio of typhoid mortality is very remarkable. He concludes from his study that all lakes, rivers and brooks which exist in populated parts of the United States and Germany have been long infected with the typhoid bacillus, and that the chief carrier of the typhoid germ into the human body is the water supply of the town. All towns, therefore, which are compelled to depend on lakes, rivers and water courses for their water supply should avail themselves of the benefits of central sand filtration.

Texas Medical Journal, Austin.

July.

46 *Appendicitis: Ochsner's and Deaver's Methods Compared. W. J. Matthews.
47 Nephritis in Summer. William F. Waugh.
48 Experience vs. Theory. L. L. Loggins.

46. **Appendicitis.**—Matthews is a strong advocate of Ochsner's method of treating appendicitis, delaying operation if the attack has already lasted forty-eight hours, until all acute symptoms have disappeared for at least two weeks, and then removing the appendix. Under his system of rectal alimentation and stomach washing he thinks we are able to save even desperate cases. The statistics show well in its favor.

Alabama Medical Journal, Birmingham.

July.

49 *Auto-intoxication and Its Relation to Disorders of the Nervous System. Benjamin Leon Wyman.
50 Traumatic Aneurism of the Femoral Artery. R. P. Huger.
51 The Clinical Uses of the Microscope. J. N. Baker.
52 *One Hundred Consecutive Cases of Myoma of the Uterus. Guy L. Hunner.
53 Glioma of Retina, with Report of Case. Allen A. Greene.
54 The Proper Management of Cases of Labor. W. H. Bell.
55 Illustration of the Circulation of the Uterus, Oviducts and Ovaries by the X-Ray and Bromide Method. Byron Robinson.
56 Hypertrophy of Tonsils. E. B. Hardin.

49. **Autointoxication in the Nervous System.**—The various autotoxins and autotoxemias are noted by Wyman, especially regarding their effect on nervous disorders. He finds as a result of his study that some autotoxin is an etiologic factor of very great importance in many functional nervous disorders, producing symptoms either by lessening, retarding, perverting or arresting the functional capacity of the nervous center, or by interference with the transmission of nerve impulses, involving both the central and peripheral neurons. Repeated and chronic autointoxication may lead to actual organic disease.

52. **Myoma of the Uterus.**—The 100 cases that are analyzed by Hunner occurred in the service of Dr. Howard A. Kelly during the former's term of eighteen months as resident gynecologist from Jan. 1, 1901, to April 1, 1902. Some of them are detailed. The following operations were performed: Myomectomy, 19; panhysteromyomectomy, 14; supravaginal hysterosalpingo-oöphoromyomectomy, 40; supravaginal hysteromyomectomy, leaving one or both ovaries, 16; vaginal myomectomy, 5; vaginal hysteromyomectomy, 6. Nine cases were treated by the method of bisection. There were 6 fatalities. In 5 of them the tumor was complicated by serious pelvic inflammatory disease. One died on the sixth day from septicemia; one on the third day from peritonitis, and one the fourth day from iliac vein thrombosis with embolism carried to the pulmonary artery; one died in ten hours from shock, which was noted before the operation; one and possibly two of the cases could have been saved if more time had been taken and the tumors removed by slow dissection. He says, while he does not undertake to draw conclusions, he thinks that if we meet in a brief record of 100 cases such a record of suffering, sterility, miscarriages, extrauterine pregnancy, hemorrhage, anemia, malignant growths, infections and deaths, one would not wonder as to his radical position as regards myoma. He does not say that he would operate in every case, but he thinks as our knowledge of the seriousness of the condition increases the indications for operating will expand.

Quarterly Journal of Inebriety, Hartford, Conn.

July.

57 *Inebriety a Disease. Lewis D. Mason.
58 *Are the Questions Relating to the Nature, Effects, Uses and Abuses of Alcohol as Existing in Fermented and Distilled Liquors Political Questions, to Be Settled by Votes at Ordinary Elections, or Are They True Questions Concerning the Public Health and Morals, and Therefore to Be Dealt with by the Sanitary Authorities and Courts of Justice? N. S. Davis.
59 Infantile Alcoholism. L. G. Robinovitch.
60 The Correlation of Alcoholism, Crime and Insanity. C. A. Drew.
61 Hyoscin in the Treatment of Morphinism. T. D. Crothers.
62 History of the International Anti-alcohol Congresses and the Temperance Movement on the European Continent. A. Forel.

57. **Inebriety a Disease.**—Mason pleads for the consideration of inebriety as a disease, not a vice, of the individual and its consideration on the same plan as insanity by the state and public.

58. **Alcohol and Public Health.**—Davis' article is a plea that alcohol should be treated as a poison, its use to be dealt with by the law as is the case with other poisons. He says the same methods of investigation applied to ether, morphin, cocain, etc., are fully credited and promptly acted on, but that in the case of alcohol the greed for pecuniary profits outweighs the regard for human welfare. As long as the contest can be kept in the field of politics these reasons will prevent anything more than temporary or partial success in the strife against alcohol. He does not say that the success in any case would be complete any more than it has been in regard to murder, theft, etc., but these occur less frequently than would be the case if laws for their direct suppression were not in force, instead of their regulation by licensing persons to do all the killing, stealing, etc., on payment of a certain amount to the public funds.

Buffalo Medical Journal.

August.

63 Some Curiosities of Medical Practice. Chauncey P. Smith.
64 *A Theoretical Note on the Vital and Toxic Theories of Cancer, and Their Bearing on the Parasitic Theory. G. H. A. Clowes.
65 *The Medical and Surgical Treatment of Bright's Disease. Charles S. Jewett.
66 Clinical Notes on Dysemia. Louis J. Gravel.

64. **Cancer.**—The theories of cancer are reviewed by Clowes, who attempts to show that the parasitic theory is not in any sense incompatible with various toxic or chemical theories, and that the production of the toxins generally recognized as playing an important part in this disease may be most readily attributed to some form of intracellular parasite. This explains the constant stimulation of cancer cells and the selective action of the toxins for one particular cell to the exclusion of others, and the apparent impossibility of infecting healthy individuals with cancer blood.

65. **Bright's Disease.**—The various treatments of Bright's disease, especially the surgical treatment suggested by Edebohls, are noted by Jewett, who offers the following tentative conclusions:

1. In certain cases of acute nephritis operation may be of use in relieving suppression of urine, pain, or hematuria; it may, perhaps, hasten recovery and aid in the prevention of chronic nephritis.
2. In hopeless cases of chronic nephritis, decapsulation will sometimes relieve distressing symptoms and prolong life.
3. Should the results claimed by Edebohls be duplicated in the practice of various operators, and should the supposed reparative results of his operation be confirmed by future autopsies, then the possibility of operative cure of certain cases of chronic nephritis must be admitted.

Maryland Medical Journal, Baltimore.

August.

67 The Origin, Purpose and Working Methods of the Medical Milk Commission. Henry L. Coit.
68 *The Use of Antitoxin in Diphtheria Associated with Pregnancy. J. Elmond Kempter.
69 *Two Minor Communications from the Clinical Laboratory. Thomas R. Brown.

68. **Antitoxin in Pregnancy.**—Kempter reports a case of diphtheria in a woman eight months pregnant which was treated by antitoxin with the usual good results. He thinks this is the first case recorded in which antitoxin was used during pregnancy and a healthy child was born at term. He suggests the possibility of production of immunity in a child by the use of antitoxin in the mother.

69. **Salt Solution Enemata and Leucocyte Counting.**—Brown suggests the value of salt solution enemata, especially after renal operations, on account of their diuretic effect and reports experiments. As a result of these it has been the custom in Dr. Kelly's private hospital to use the following method in all cases where the kidney has been operated on: A pint or more of normal salt solution is administered by rectum every six, eight or twelve hours, according to the needs of the case, for a number of days after the operation. This has caused in 6 cases of nephrotomy and 12 or more of nephropexy in which the plan has been adopted a very free secretion of urine. Convalescence has been more comfortable and nausea and headache markedly diminished. The method is so simple and so easily carried out that he thinks it should be incorporated among the general procedures in the after-treatment of all cases operated on under general anesthesia.

In the same article he reports a number of cases of appendicitis in which the leucocyte count was used, illustrating its value as distinguishing cases of peritonitis, autointoxication, constipation, hyperchlorhydria and intestinal obstruction. Peritonitis is always accompanied with leucocytosis, excepting in intense infections, and intestinal obstruction is associated with it when inflammatory processes or beginning gangrene exist. Autointoxication with constipation and intense hyperchlorhydria are not associated with the leucocyte increase, and are to be treated on medical not surgical lines, hence the absence of leucocytosis may be of real value in distinguishing whether or not post-operative surgical interference is advisable, especially in anemic patients or those with an atonic condition of the gastrointestinal tract or those in whom the intestines had been handled a great deal. The leucocytosis of infection must not, of course, be confused with the transient post-anesthetic leucocytosis, especially if ether has been employed. He reports the conclusions of King on post-operative non-septic leucocytosis, noticed in The Journal, xxxix, ¶49, p. 723.

Western Medical Review, Lincoln, Neb.

July.

70 Medical Inspection of Schools. S. R. Towne.
71 *The Treatment of Scarlet Fever: Its Complications and Sequelæ. H. M. McClanahan.
72 The Acute Heart Disease of Children. H. Winett Orr.
73 Ectopic Gestation, with Special Reference to Diagnosis. Georgiana Grothan.
74 Dystocia. A. B. Somers.
75 The Business Side of Obstetrics. Mary A. Quincy.

71.—This article appeared in The Journal, July 4, 1903, page 31.

Texas Medical News, Austin.

July.

76 *The Poisonous Snakes of Texas, with Notes on Their Habits. J. D. Mitchell.
77 *Tropical Diseases: The Importance and the Opportunity for Their Study in Texas Imposes the Obligation to Provide the Facilities for Training Medical Men in Their Prevention, Diagnosis and Treatment. John T. Moore.
78 Tubercular Peritonitis. J. E. Gilcreest.

76. **Poisonous Snakes of Texas.**—Mitchell describes the poisonous snakes of Texas, of which he enumerates 12, all with one exception belonging to the crotalus family or pit vipers, which includes the rattlesnake and copperhead. The exception, *Elaps fulvius*, which seems to be not uncommon there, is a deadly poisonous snake, though seldom so considered as it is not aggressive.

77. **Tropical Diseases.**—Moore's chairman's address in the Section on Practice of Medicine of the Texas Medical Society is a plea for the establishment of an institute or chair for instruction in tropical diseases, which, he says, are likely to occur in Texas. That state, he shows, has some special advantages for their study.

Medical Age, Detroit.

July 25.

79 Ocular Evidences of Kidney and Liver Disease. F. E. Sampson.

International Journal of Surgery, New York.

August.

80 Gunshot Wounds of the Abdomen. Henry Janes.
81 *A Brief Résumé of Pelvic Abscess; Its Diagnosis and Mode of Attack: with a Short Narrative of Five Cases Illustrating Points in the Diagnosis. Thomas H. Manley.
82 The Technics of Amputations. R. H. Cowan.
83 Operation for Complete Laceration of the Perineum without Leaving Stitches in the Bowel. C. E. Cantrell.
84 The Surgical Assistant. Abdominal Operations. (Continued.) Walter M. Brickner.
85 Excision of Entire Colon; Death. Emory Lanphear.
86 Report of a Case of Senile Gangrene. B. N. Stevens.
87 Gunshot Wound of Mother and Child Thirty-three Hours Prior to Delivery. W. H. Wiley.

Journal of Advanced Therapeutics, New York.

August.

88 On the Administration of Strong Galvanic Currents to Patients. Robert Reyburn.
89 Newman's Portable Galvanic Battery. Robert Newman.
90 X-Ray Therapy. William L. Heeve.
91 The Treatment of Insolation on Heat Stroke. Curran Pope.
92 Mechanical Vibrations as a Physical Agent in the Treatment of Disease. Frederic H. Morse.
93 Psychic-Therapy. J. Holcomb Burch.

Mississippi Medical Record, Vicksburg.

August.

94 Address Before Mississippi Department of Public Health. C. Kendrick.
95 Report of a Case of So-called Sporadic Scarlatina. Fred M. Brougher.
96 Treatment of Extreme Urinary Retention. E. Forrest Hayden.

Toledo Medical and Surgical Reporter.

August.

97 Medical Trades Unionism. Charles M. Harpster.
98 Report of a Case of Empyema. Frank Warner.
99 A Method for Removal of the Prostate Gland. Hal C. Wyman.
100 Neglected Opportunities of Boards of Health. C. O. Probst.

Fort Wayne Medical Journal-Magazine.

July.

101 Obstruction of the Bowels; Report of a Case, with Remarks. L. H. Dunning.

Pennsylvania Medical Journal, Pittsburg.

July.

102 Pulmonary Tuberculosis; Etiology and Symptoms. John E. Scheifly.
103 Sanatorium Treatment. Elwell Stockdale.
104 The Diagnosis and Prognosis of Early Pulmonary Tuberculosis. Charles H. Miner.
105 The Home Treatment of Tuberculosis. Walter Davis.
106 Inguinal Hernia. J. F. Davis.
107 Phototherapy and Radiotherapy, with Report of Cases. Russell H. Boggs.
108 A Case of Perityphlitis. L. B. Kline.
109 Debatable Points in the Treatment of Appendicitis. W. D. Hamaker.
110 Neurasthenia. T. M. T. McKennan.

Wisconsin Medical Journal, Milwaukee.

July.

111 The Present Status of Surgery of the Stomach. William J. Mayo.
112 Digestion in Infancy. Albert W. Myers.
113 Chronic Appendicitis; Report of Two Cases with Obscure Symptoms. L. H. Prince.

Colorado Medical Journal, Denver.

May.

114 Appendicitis in Children. Frank S. Churchill.
115 Gleet; What Is It and How Can the General Practitioner Successfully Treat It? Donald Kennedy.
116 Epilepsy Following a 5-grain Dose of Camphor Monobromate; Report of a Case. H. A. Lord.

Columbus Medical Journal.

July.

117 The Physician and His Ideals. Rev. Carl Gregg Doney.
118 Eczema. J. B. McComb.
119 Enlarged Tonsils, a Cause of Middle Ear Catarrh. C. P. Linhart.
120 Congenital Hypertrophy of the Pylorus. William D. Inglis.
121 Fractures of the Clavicle. William L. Dick.

Medical Examiner and Practitioner, New York.

July.

122 Incidence of Nervous Disease in Life Insurance Examinations. Harold N. Moyer.
123 Physical Signs of Arteriosclerosis. Charles L. Mix.
124 Life Insurance and Medical Examinations from a General Agent's Standpoint. James L. Ferguson.
125 A Study on Light. J. Mount Bleyer.
126 Open Fractures of the Shafts Involving the Articulations. Thomas H. Manley.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

August 8.

1 A Discussion on the Vaccination Acts and the Prevention of Smallpox. J. C. McVail.

end passing into the trachea, the other end into the larynx, and held in place by a silk thread tied around the middle of the drain and fastened to the neck.

Beitraege zur Geb. und Gyn. (Hegar's), Leipsic.

Last indexed XL, page 1687.

44 (VII, No. 2.) **Tier Suture of Abdominal Incision.* R. Werth (Kiel).—Ueber die Etagennacht der Bauchwunde.
45 Correlations of Sexual Glands and Sex Determination. A. Hegar (Freiburg i. Br.).—Korrelationen der Keimdrüsen und Geschlechtsbestimmung.
46 *Ueber die Tampon-Drainage der Beckenbauchhöhle bei Laparotomien. A. Döderlein (Tübingen).
47 *Zur Frage der Drainage bei Laparotomien. H. Fehling (Strasburg).
48 Lacerations of Uterus During Pregnancy. Balsch (Tübingen).—Ueber Zerreissungen der Gebärmutter in der Schwangerschaft.
49 Embryologic Study of Formation of Allantois. H. Knoop (Leyden).—Ueber eine frühzeitige amniotische Missbildung, nebst Bemerkungen über das Wachsthum der Eihäute nach dem Frucht-Tode und die Bildung der sogen. freien Allantois.

44. **Tier Suture of Abdominal Wall.**—Werth has examined lately 393 patients out of his total of 1,338 laparotomies. In 279 the operation had been performed from one to fifteen years previously. Hernia had followed in 13 of the 393, but in only 5 was it a cicatricial hernia, and in these cases there had been suppuration of the laparotomy wound. He always uses "cumol catgut" and keeps his needles in pure lysol. In 19 cases no adhesions were found at a second laparotomy, while in 17 they were noted.

46. **Tampon Drainage After Laparotomies.**—Döderlein has drained through the posterior vaginal vault 161 times in 754 laparotomies, draining through the abdominal incision in only 12. His operative mortality was 3.7 per cent. The mortality in 593 cases not drained was 2.3 per cent., and of the others 8.7 per cent., the difference due to the severity of the lesions. The most unfavorable results were observed with suppurative processes.

47. **Drainage After Laparotomy.**—Fehling prefers abdominal drainage, and resorts to the vaginal only after a Werthheim operation or colpotomy. He drains by Mikulicz's technic, and reports that he used it in 36 out of 327 laparotomies, his total mortality being 4.5 per cent.

Hospitalstidende, Copenhagen.

Last indexed page 137.

50 (XLVI, Nos. 19-20.) *Laryngeal Tuberculosis in Case of Pregnancy. N. Godskesen.—Strubetuberkulosen under Svangerskab og Födsel.
51 *"Side" Adenoid Vegetations and Instrument for Their Removal. J. Möller.—Om Sidevegetationerne i Naesesvaelget samt Beskrivelse af et Instrument til deres Fjaernelse.
52 (Nos. 21-22.) *Experimental Cancer Research. C. O. Jensen.—Exp. Undersögelser over Kraeft hos Mus.
53 (No. 23.) Ulcus simplex vesicæ. S. Nordentoft.
54 (No. 24.) **Treatment of Lupus with Refrigeration.* P. Sorensen.—Behandling af Lupus med Frysning.
55 (No. 25.) Et Tilfaelde af Endarteriitis obliterans hos en 32 aarig Mand. V. Christiansen.
56 Leukocytæmi og Appendicitis. E. Müller.

50. **Laryngeal Tuberculosis in Pregnancy.**—Godskesen reviews 55 cases, only 24 of which have been previously published, and analyzes his own material, which is included. On the basis of these experiences he formulates the principles for procedure as induction of abortion in the early months of the pregnancy, and later, careful supervision with tracheotomy at the right moment. The dangers of pregnancy in case of laryngeal tuberculosis are shown in the series of 31 previously unpublished cases which he has collected, including 1 reported by V. Pleth of Chicago. The death of the mother soon after delivery is mentioned in all but 5 or 6, and in only 7 did the child survive. The pregnancy ran its course to term in 25 out of 46 cases. In 26 the child was delivered alive, and in 23 instances it proved to be healthy. The patients died undelivered in 3 cases and abortion occurred in 5. In 8 delivery took place four to six weeks before term, in 2 of these artificially induced. The insidious beginnings of laryngeal tuberculosis and its rapid development under the influence of pregnancy should rouse the physician to be on the alert at the slightest symptoms attracting attention to the throat, especially in patients who have apparently recovered from a tuberculous throat or lung lesion. In 26 cases the laryngeal tuberculosis commenced during the pregnancy usually during the first half. In 7 cases the affection had existed prior to the pregnancy, but had caused no alarming symptoms until then, and in the others the pregnancy did not seem to materially affect the lesion in the throat. The lungs were involved in nearly all the cases, but the throat lesion was predominant. In 35 local treatment or an endolaryngeal operation was alone attempted. In 2 a tuberculous circumscribed tumor was successfully removed. Tracheotomy was done in 8, laryngo-fissure in 3 and subhyoid pharyngotomy in 1. The tracheotomized patients were in the fifth or sixth month one each, and 2 each in the seventh, eighth or ninth month of the pregnancy. Three died soon after the abortion or delivery; 2 were dismissed in comparatively good health after delivery; 2 died nearly two years later from the progress of their tuberculosis and one is still alive after eight years. These results are encouraging, as this operation is undertaken only in the severer cases. There is no doubt but what more of the children might have been saved if tracheotomy had been done more frequently.

51. **"Side Adenoids."**—In 200 operations for adenoids undertaken at Mygind's clinic during the last year, the vegetations were what he calls "side adenoids" in 9 cases. In his private practice the number was 11 in 120. Some of the patients were 30 to 40 years old. The symptoms seem to be about the same as with the ordinary vegetations. He gives cuts of a couple of adenotomes especially adapted for reaching these "side adenoids." They seem to resist the tendency to atrophy more than ordinary vegetations.

52. **Experimental Cancer Research.**—Jensen has continued his studies of malignant tumors on white mice and now announces that he has succeeded in transmitting through 22 generations a tumor growth originally derived from cells of a melano-sarcoma on a horse. He gives photogravures of one of the mice showing the external aspect and the dried specimen of one of the tumors, which swelled the animal to nearly twice the normal circumference of the body back of the front legs. He also gives 14 cuts of the histologic findings. They indicate a pronounced carcinomatous structure, but there was no evidence of metastasis. The tumors continued to grow until the animals died from cachexia or from ulceration of the testicles. The tumors were transmitted from one generation to another by transplantation, and the transplantation was successful in 40 to 50 per cent. of all the attempts on white mice, but failed on other animals except on a few ordinary mice. There was not the slightest evidence in favor of a parasitic action.

54. **Treatment of Lupus with Refrigeration.**—Sorensen reports that he has treated 6 cases of lupus to date with a freezing application, spraying the parts with ethyl chlorid, as practiced by Detlefsen. Such remarkable improvement was obtained that he thinks we can rank the Detlefsen with the Finsen method of treating lupus as a notable progress. He regards the Finsen as the standard method, but in cases in which a course of Finsen treatment is impracticable, the freezing method enters on its rights. It is peculiarly adapted for private practice. The sittings are daily at first, then with longer intervals.

Upsala Laekareforenings Foerhandlingar.

57 (VIII, Nos. 3-6.) *Traumatic Injuries of the Semilunar Cartilage in the Knee. E. Bovin.—Om traumatiska meniskrubbningar i knäleden.
58 **Diagnosis of Lung Affections.* I. Hedenius.—Bidrag till lungsjukdomarnes diagnos och Kasuistik.
59 *Oxidation* Processes. T. Thunberg.—Om de fysiologiska oxidationsföreteelserna.
60 *Saline Infusion in Acute Anemia. F. Zachrisson.—Kliniska studier öfver den intravenösa och subkutana saltvatten-*infusionens värde vid akut anemi.*
61 Ar Unverrichts s. k. *familiära myokloni en klinisk entitet,* som eger berättigande inom nosologien? H. Lundborg.

57. **Traumatic Injuries of Meniscus.**—Bovin has found in the literature reports of 163 cases of total or partial extirpation of the meniscus on account of traumatism. He tabulates the details of 148 of them; all but 26 were cases of rupture. He further gives the complete history of 10 cases he has personally observed and treated. He also gives his conclusions in regard to the physiology and anatomy of the meniscus from the study of 15 fresh and 36 formalin-hardened specimens. He affirms that

the meniscus is not a rigid and unyielding body, but changes its shape and position under the influence of traction and pressure. Twelve photogravures accompany the comprehensive article. The median meniscus is found injured much more frequently than the lateral, and isolated rupture of the capsular insertion was the most frequent of all. A recent injury of the meniscus is often mistaken for an internal sprain or contusion with hemarthrosis or for acute traumatic synovitis. An old injury may be mistaken for a free or pedunculated body in the joint or other lesion. The slightest suspicion of recent injury of the meniscus imposes the necessity of immobilization and bed rest for three or four weeks after the dislocated cartilage has been replaced. In chronic cases an operation will usually restore normal function to the joint. An old injury of the meniscus left to itself is liable to seriously compromise the function and entail chronic synovitis, and possibly arthritis deformans. The meniscus was sutured in 39 cases, and in 6 there was recurrence. Infection and ankylosis occurred in 2 and protracted convalescence in 1. The longer manipulations required for suture increase the probabilities of infection. Effusion requiring tapping a few times followed in one case. In 2 others the movements of the joint were somewhat restricted, probably from the longer mobilization required after suturing than after extirpation. Bovin resorted to suture only once. This was a case of recurrence of the disturbances after partial resection. The fragment of the meniscus that had been left was sutured to the capsule with perfectly satisfactory results.

58. **Diagnosis of Lung Affections.**—Hedenius warns that we must not rely too much on the physical signs in diagnosing tuberculosis. He mentions that the muscle sounds in the esophagus are liable to deceptively simulate râles, and describes a case in which the physical signs indicated apical catarrh, and a "congestion bronchitis" was found localized in the apex, but no traces of tuberculosis could be detected. Death had occurred in consequence of heart disease, and special care is necessary in determining the significance of the physical signs in the lungs in case of heart disease or with emphysema or curvature of the spine. In another case he describes the *Streptococcus longus conglomeratus* was apparently alone responsible for the symptoms and lesions, bronchopneumonia with multiple abscess in the lungs, diffuse sero-fibrinous pneumonia and empyema at three points in the wall of the thorax, suggesting actinomycotic infection. An abscess was also found in the thalamus opticus.

60. **Saline Infusion in Acute Anemia.**—In this second part of Zachrisson's study he reviews 20 cases he has found on record in which saline infusion proved a life-saving measure in acute anemia. He comments with surprise on the fact that all but 2 were published by American or English writers, and also on the invariable success of the measure. The unsuccessful cases are probably not published, he adds. He reviewed 7 cases from his own experience in the first part of his article.

Gazzetta degli Ospedali, Milan.

Last indexed page 70.

62 (XXIV, No. 44.) *Sulle sostanze estrattive riduttrici delle urine nella pellagra ed in altri stati morbosi. L. Lucatello.
63 *Auto-emolisi da alcool. S. Mircoli and A. Gervino.
64 Sul fenomeno dell' agglutinazione del sangue (of the blood). E. Gilardoni.
65 (No. 47.) *Applicazione all' uomo del siero antipneumonico Tizzoni-Panichi. L. Panichi (Bologna).
66 Granulazione iodofile e granulazione eosinofile. Tarchetti.
67 *Contributo allo studio delle cause di morte improvvisa nei bambini. G. Segadelli.
68 *Treatment of Pyemia with Iodized Milk. G. Santoro.—Sulla cura della pioemia col latte iodato Sclavo.
69 (No. 50.) *Lintervento chirurgico nelle nefriti mediche. D. Maragliano.
70 Influence of Ichthyol on Elimination of Sulphur in the Tuberculous. G. Radice (De Renzi's clinic, Naples).—Influenza dell' ittiolo sulla eliminazione dello zolfo nei tubercolotici.
71 *Il guaicolo nella parotite epidemica. M. Ragazzi.
72 Emoglobinuria dei malarici. A. De Blasé.
73 (No. 53.) Contributo alla casuistica della sieroterapia antistreptococcico. A. Montini.
74 E. Maragliano's Address at Madrid Congress on Tuberculosis.—La lotta e la immunizzazione dell' organismo contra la tubercolosi.
75 (No. 56.) La causa della malattia dominante nei polli (in poultry). G. Catterina.
76 Anemia infantile post-vaccinica. M. Bellotti.
77 *Sulla sutura delle arterie. A. Salomoni.
78 *Sulla siero-terapia della tubercolosi polmonare. F. Piera.
79 Un caso acuto di tetano reumatico. A. Bussi.
80 (No. 59.) *La fisiopatologia del pancreas in rispetto al diabete ed alla glicosuria. N. De Dominicis.
81 (No. 62.) *Diagnosi della tubercolosi incipiente. S. Ceraulo.
82 *Tuberculosis Cured by Intercurrent Infection. T. Silvestri.—Può la tub. polm. arrestarsi e guarire per il sopraggiunzere di una nuova infezione?
83 Situs viscerum inversus. A. Lamari.
84 (No. 63.) *Clino psycho-terapia dell' isterismo e della neurastenia nella pratica ospitaliera. S. Arnaud.

62. **Reducing Power of the Urine in Diagnosis.**—Lucatello tabulates the fluctuations in the reducing power of the urine in different diseases, and urges wider use of this simple approximative test of the elimination of the extractives. He illustrates the Bufalini apparatus for the purpose, which is a modification of Gerhard's.

63. **Auto-Hemolysis from Alcohol.**—Mircoli noticed in a certain hard drinker that sudden suspension of liquor was followed by hemoglobinuria, which vanished at once when the man resumed his alcohol. Tests on some rabbits also showed that the serum was blood-stained after ingestion of a small amount of alcohol daily for three months. There was no hemoglobinuria, but the proportion of urobilin was abnormally high. He thinks that the alcohol causes hemolysis, but that the rabbit kidney, being comparatively healthy and vigorous, transforms the bilirubin into urobilin. This occurred also in the hard drinker first mentioned, except when his exhausted and probably pathologic kidney missed the accustomed stimulus of its daily quantum of alcohol. The rabbit blood under the influence of the alcohol also lost its coagulating power almost entirely. These effects of the alcohol on the blood are not direct, as *in vitro* it does not dissolve the reds nor prevent coagulation. They suggest that alcohol should be avoided when there is a tendency to hemophilia.

65. **Antipneumonia Serum.**—Tizzoni's serum is derived from rabbits, and he has had only a small quantity at his disposal. The results of its application in 7 clinical cases are described in detail. It was given by intravenous injection and never produced the slightest inconveniences of any kind. The smallness of the dose prevented any disturbance of the circulation. His subjects were from 14 to 42 years old, and the injections were commenced the second to the fifth day of the disease. In three patients there were malarial antecedents. The beneficent action of the serum was unmistakable, rendering the entire syndrome milder, the expectoration looser. The softening effect on the sputa and its easier expulsion resemble the effect of antidiphtheria serum on the false membranes. All of the patients injected before the fifth day showed marked benefit, but one not treated until the fifth to seventh days did not seem to be affected.

67. **Causes of Sudden Death in Infants.**—Segadelli argues to prove that reflex inhibition from a mild gastro-intestinal catarrh may be a cause of sudden death in an infant, and describes a case which he thinks belongs in this category. The catarrhal affection had been so slight that it had failed to attract attention and was revealed only at the autopsy.

68. **Iodized Milk in Pyemia.**—Professor Sclavo of Siena prepares an iodized milk by adding iodin and albumin to milk freed of its fat, and sterilized. It can be administered by the mouth or by subcutaneous injection, and has proved a remarkably effectual means of giving iodin, especially in local tuberculosis, exophthalmic goiter, digestive disturbances, etc. The Italians attribute to iodin the property of augmenting the organic resisting powers, enabling the tissues around a local lesion to maintain a more effectual defense. Sotis states that Sclavo's iodized milk promptly benefited 2 patients with chondroperichondritis and 1 with laryngeal stenosis, in the latter case rendering the projected tracheotomy unnecessary. It also aided in the cure of 2 cases of chronic suppuration of the ear, and Ferreri reports great advantage from it in sclerosis of the middle ear, syphilitic or otherwise. Other examples of the benefits from iodized milk in intoxication from an acute or chronic infection are being constantly reported. and Santoro here describes 2 cases of pyemia in which

the patients completely recovered after a daily injection of 10 c.c. of the iodized milk for 24 to 50 days.

69. **Surgical Treatment of Medical Nephritis.**—D. Maragliano reviews the work that has been done in this line, and prophesies a brilliant future for the operation of nephrolysis as possibly equally effective while much less serious than nephrotomy. He adds that no clinical experiences with it have yet been published.

71. **Guaiacol in Mumps.**—Grande has reported great relief from inunctions of the inflamed glands with a salve of 1 gm. guaiacol to 10 gm. each of vaselin and lanolin. Ragazzi corroborates the prompt benefit from its use; the pain subsides and the general symptoms become rapidly attenuated.

77. **Suture of Arteries.**—Salomoni mentions that Matas' method of suturing arteries closely resembles the method he reported in 1900 after long experimental testing. He aims to bring the endothelium on both stumps into extensive contact, passing the needle from without into the vessel on one lip, and from within outward on the other.

78. **Serum Treatment of Pulmonary Tuberculosis.**—Piera has used the Maragliano serum extensively, and states that his and others' experience has shown that serum treatment will cure all the cases of circumscribed tuberculosis, without cavities, and with or without fever. Also the diffuse forms of superficial inflammation, even although apparently very severe. The diffuse forms with infiltration are also curable under prolonged treatment, but the forms with cavities are not curable by this means.

80. **Physio-Pathology of the Pancreas.**—De Domenicis concludes his monograph with the statement that the destruction and elaboration of sugar may occur independently of the pancreas, indicating that other organs participate in these processes. Total destruction of the pancreas entails severe disturbances in the metabolism owing to the loss of this important factor in the processes of digestion. The liver suffers particularly from its loss, and secondarily the nervous system.

81. **Diagnosis of Incipient Tuberculosis.**—Ceraulo calls attention to the frequency of palpitations and of phosphaturia in commencing tuberculosis. He noted the former in 7 out of 11 cases, and the latter in 9. He did not find enlargement of the glands in the axilla as constant as these other signs.

82. **Tuberculosis Cured by Intercurrent Infection.**—Silvestri describes 3 cases which he thinks justify him in the assumption that a secondary streptococcus invasion of the lungs following a recently-established tuberculosis, rendered the tissues unfavorable for the tubercle bacilli. The consequence was that the latter died out, and when the patients had recovered from their streptococcus infection the tuberculosis was extinguished.

84. **Isolation, Bed-Rest and Psycho-Therapy for Neurasthenia, Etc.**—Arnaud lauds in high terms what he calls "Déjerine's modification of the Weir-Mitchell treatment." He has coined the term "clinopsychotherapy" for it and relates numerous instances to prove its value, even in a public hospital, for treatment of hysteria, neurasthenia and allied conditions. The psychotherapy is the most important feature, and its influence is amazingly enhanced by the other measures, as has been proven in 200 cases thus treated at the Salpetrière Hospital at Paris.

Medizinskoe Obozryenie, Moscow.

Last indexed XL, page 1618.

85 (LVIII, 19.) Mania. P. B. Gannushkin and S. A. Sukhanoff. —K utcheniyu o manii.
86 K kasuistikye oslozhenenii aneurismi aorty. P. S. Usoff.
87 *Patent Foods for Artificial Feeding in Surgical Practice. S. B. Vermel.—O primyenenii iskusstvennykh pitatelnykh, etc.
88 (No. 20.) *Treatment of Tuberculosis in Syphilitics. A. P. Langovoi.—O primyenenii protivosyphilititcheskova letcheniya u bolnykh, stradayushtchikh odnovremenno tuberkulezom i syphilisom.
89 Theoretical Study of Possibility of Applying Chemical Rays in Ophthalmology. A. A. Maklakoff.—Vosmozhnost primeneniya chem. lutchei svyeta v ophtalmologii.
90 Seventeenth Annual Index of Russian Medical Literature. Year 1901. Alphabetically arranged by subjects.
91 (No. 21.) *Treatment of Cancer in Pregnant Uterus. V. V. Uspensky.—Terapiya raka matki, oslozhennova beremennostyu.
92 Differentiation of Endometritis Dolorosa. D. L. Tchernekhovsky.—O rasposnavanii endometritis dol.
93 Case of Syphilitic Arthropathy in Tabes. I. A. Russloff.—K kasuistike zabolyebanii sustavov u tabitikov.
94 *Unusual Forms of Tabes. M. Lapinsky.—O ryedko vstryetchayushtchikhsya formakh spinnoi sukhotki.
95 *Treatment of Certain Forms of Chorea Minor with Antistreptococcus Serum. P. A. Preobrazhensky.—Lyetchenie vittovoi plyaski protivostreptokokkovoi syvorotkoi.
96 (No. 22.) *Nervous-cerebral Form of Grippe. V. T. Velyamovitch.—K kazuistikye nervno-mozgovykh form grippa.
97 *Treatment of Cancer of Pylorus. T. Rose.—K operat. lyetcheniyu raka privratnika.
98 (No. 23.) *Cholelithiasis. S. B. Vermel.—K kasuistike zheltchnokamennoi bolyezni.
99 *Pathology of Broad Ligaments. I. M. Lvoff.—K patologii shirokikh svyazok.
100 (No. 24.) *Symptomatology of Cerebral Syphilis. V. V. Muravieff.—K simptomatologii mozgovovo syphilisa.
101 Seven Cases of Congenital *Hernia* of Brain. D. E. Gorokhoff. —Sem slutchaev vrozhdennikh mozgovikh grizh (cephalom).
102 *Value of Mineral Waters in Cholelithiasis. M. I. Radkevicz. —Znatchenie mineralnykh vod pri letchenii cholelitiaza.

87. **Patent Foods After Surgical Operations.**—After operations on the gastrointestinal tract the question of feeding is of great importance. Vermel is convinced that the artificial foods on the market, such as somatose, sanatogen, tropon, etc., are useful only when given in combination with fats and carbohydrates, as they consist mainly of albumin. The patients are unable sometimes to tolerate them in large quantities, and small amounts fail to supply the necessary quota of calories. He prefers the ordinary articles of diet, milk, cream, eggs, alcohol, meat juice, sugar, etc., in the right proportions to supply the needed fat, albumin and carbohydrates. This method in his clinic has given the best results.

88. **Treatment of Associated Syphilis and Tuberculosis.**—The differential diagnosis between syphilis of the lungs and pulmonary tuberculosis is difficult, but differentiation is liable to be still more difficult when the two diseases are associated. Opinions differ as to treatment of this combination of syphilis and tuberculosis. Zakharin, Hiller and others believe that antisyphilitic treatment is dangerous in this case, but Neisser, Potain, Pospeloff and others advocate it. Langovoi reports 2 cases which prove the correctness of the latter view. The first patient was a man of 47 who contracted syphilis at 22 and tuberculosis of the lungs at 44. He was treated with potassium iodid—20 to 30 grains daily for two weeks with thirty inunctions of gray ointment, 45 grains daily, and after twenty-five days five inunctions of 60 grains each and then seven of 80. The general condition and all the symptoms improved under this treatment. The red corpuscles increased from 4,220,000 to 5,800,000 and the hemoglobin from 70 or 75 per cent. to 85 and 90 per cent. The cough and dyspnea subsided, but the tubercle bacilli were still found in the sputa. The antisyphilitic treatment had evidently done no harm and had much benefited the patient. The second patient was a man of 33, who entered the clinic on account of complete aphonia. The laryngoscope disclosed an ulcer on the right vocal cord assumed by one specialist to be of a tuberculous nature, while another diagnosed it as syphilitic. There was a history of syphilis contracted twelve years previously, and followed four years later by slight hemoptysis suggesting tuberculous infection of the lung. Symptoms of tabes dorsalis were also apparent on careful examination. The treatment consisted in inunctions of mercurial ointment of 50 to 80 grains each for fourteen days, with potassium iodid at the same time, 20 to 30 grains a day. All treatment was then suspended for two weeks, after which the inunctions were resumed, 80 grains daily, with potassium iodid internally for eighteen days. Examination of the larynx then showed the complete cicatrization of the ulcer, while the voice had returned to normal, and all traces of the tabetic symptoms had vanished. It was assumed that the patient had presented a syphilitic polyneuritis and meningitis, which induced compression of the nerve roots and this had been the cause of the tabetic symptoms. As the polyneuritis and meningitis improved under the antisyphilitic treatment the symptoms subsided.

91. **Treatment of Cancer in Pregnant Uterus.**—Uspensky has found that cancer in a pregnant uterus is especially

liable to involve early the pelvic glands, and, hence, prompt and radical surgical intervention is particularly necessary in such cases. The complication with pregnancy does not modify the indications. Vaginal extirpation is preferable, he thinks, and can be done up to the third or fifth month without reducing the size of the uterus. Up to the fifth or seventh month evacuation of the liquor amnii is usually sufficient for the purpose, but later than this the fetus must be extracted. If viable, vaginal cesarean section is indicated, followed by total extirpation of the uterus.

94. **Unusual Forms of Tabes.**—Lapinsky, in 5 cases, noted paralyses or pareses of the arms or legs as the initial symptoms of tabes, before sensory disturbances developed.

95. **Antistreptococcic Serum in Chorea.**—A girl of 18 exhibited a violent form of chorea minor, accompanied by retention of urine, temporary paralysis, aphasia and mental disturbances. As arsenic, chloral and bromids failed to relieve, and as streptococci were found numerous in the blood, treatment with antistreptococcic serum was attempted. After thirteen to fifteen injections the symptoms abated and the patient recovered. A slight relapse was cured by Fowler's solution. The marked benefit from serum treatment in this case suggests that chorea minor may in some cases be due to infection and that the blood should be examined as a routine measure and polyvalent antistreptococcic serum used in appropriate cases.

96. **Nervous-Cerebral Forms of Grippe.**—The action of the grippal toxin on the brain substance is liable to induce intermittent fever and also pulsus tardus from its influence on the vagus center. These two symptoms are characteristic of la grippe, Velyamovitch believes, and reports a case to confirm this opinion.

97. **Operative Treatment of Cancer of the Pylorus.**—Rose urges prompt operation and reports two cases. In the first the patient was still in good health fifteen months after resection of the pylorus, rapidly recovering after the operation. In the second case gastroenterostomy was performed and the symptoms were relieved for fifteen months, after which slight evidences of recurrence of trouble were manifest. Free hydrochloric acid appeared in the stomach contents after intervention in both cases, and the lactic acid disappeared.

98. **Cholelithiasis.**—In one of the 3 cases described, the gallstones had developed under the influence of malaria, the parasite being found in the blood, and all symptoms vanished under quinin sulphate, 9 grains a day, supplemented by Fowler's solution. In another case the gallstone affection had lasted unrecognized for fifteen years, until the patient evacuated 3 gallstones in the feces and 146 more in the twenty following days, all without colics. A fistula had evidently formed between the gall bladder and duodenum. The patient had no further disturbances. About three weeks before voiding the stones the patient had taken six calomel powders of 2.75 grains each in the course of a day, and this had been followed by a mild course of specific treatment, as syphilitic antecedents were suspected. Five leeches and some Spanish flies had been also applied to the gall-bladder region. In cases in which small stones are suspected surgical intervention should not be considered unless medical treatment fails to produce good results soon. The differentiation is the chief difficulty.

99. **Pathology of Broad Ligaments.**—Lvoff reports 2 cases of fibroma of the broad ligaments, the surrounding organs intact, and 2 of echinococcus cysts in these ligaments. All were treated by extirpation of the affected ligament, with most satisfactory results. The ligament and fibroma in one case were removed through a posterior colpotomy, in another through a lateral colpotomy on the corresponding side. The echinococcus cysts were removed by a laparotomy in one case, supplemented in the other by posterior colpotomy on account of a concomitant parametritis.

100. **Cerebral Syphilis.**—In the 2 cases described mercurial and iodid treatment, supplemented by local blood-letting (Spanish flies to the neck) produced great improvement. In each case there were marked disturbances in the memory. This symptom is characteristic of Korsakoff's psychosis. Muravieff believes that it indicates a syphilitic affection of the brain.

102. **Value of Mineral Waters in Cholelithiasis.**—Radkevicz is convinced that mineral waters are fully as important as operative treatment for the cure of cholelithiasis. Surgical intervention does not exclude the possibility of relapses, but followed by treatment with mineral waters, it ensures a complete cure.

New Patents.

Patents of interest to physicians, July 21-August 11:

735660. Formaldehyde fumigator. Leon Feval, New Brunswick, N. J.
735670. Stethoscope holder. William Jones, Denver.
735276. Vaginal syringe. John R. Lane, New York City.
735542. Spirometer. Henry T. Lyttleton, Marshall, Texas.
735396. Machine for grading tablets. James M. MacDonald, Detroit.
735400. Surgical instrument. Richard P. McCully, Brooklyn.
735135. Invalid bed. William McLennan, Ogdensburg, N. Y.
735141. Surgical apparatus. George A. Ogle, Catonsville, Md.
735581. Therapeutic apparatus. Adrian Pollacsek and B. Beer, Vienna.
735591. Depurator. Lloyd H. Richards, El Paso, Texas.
735325. Hernial truss. Carl Weck and F. Weck, Grafrath, Germany.
735687. Electrotherapeutic apparatus. Scheuyler B. Zink, Portsmouth, Va.
735851. Therapeutic apparatus. Gerald L. Abell, Oakland, Cal.
736059. Device for administering anesthetics. George L. Bennett, Chicago.
736072. Arm rest for crutches. Harry S. Cole, Newtonsville, Ohio.
735860. Device for preventing flat feet. Catharine L. Darby, Brooklyn.
735723. Nebulizer. Thomas De Vilbiss, Toledo, Ohio.
735959. Respirator. Eugene Folkmar, Charlottenberg, near Berlin, Germany.
736086. X-ray tube. Robert Friedlander, Chicago.
735968. Massaging implement. Julius J. Grobe, Chicago.
736250. Making hemoglobin preparations. Friedrich Hanssen, Altona-on-the-Elbe, Germany.
735876. Hot water bottle. Joseph Holland, Akron, Ohio.
736111. Inhaling apparatus. Theodor Kautz, Bad Reichenhall, Germany.
736328. Sterilizable surgical instrument case. Helen P. Wilson, Vanwert, Ohio.
734213. Hot water bag. Joshua Barnes, Smithtown Branch, N. Y.
734252. Lung testing apparatus. Paul von Boeckmann, New York City.
734159. Stethoscopic instrument. Robert C. M. Bowles, Boston.
734302. Siphon filler. Henry Carmichael, Malden, Mass.
734229. Fumigating and disinfecting device. George F. Hardinge, Vineland, N. J.
734323. Bottle closure. William Harrison, Redhouse, W. Va.
733977. Massage apparatus. Francis G. Lagerstrom and A. G. Anderson, Salina, Kas.
734270. Eye shade. Orlando B. Lester, Washington.
734238. Depurator. Augustus W. Ottignon, Seattle.
12133. Reissue. Massage machine. Charles Pfanschmidt and J. Siefert, Chicago.
734498. Dilating bougie. Friedrich R. Bachler, Oxnard, Cal.
734663. Ointment or pill slab. William Bower, Olney, Ill.
734849. Making sulphuric acid. Gustave Gin, Paris.
734586. Obstetrical instrument. Hiram Mendenhall, Audubon, Iowa.
734926. Artificial foot. William F. Mumberg, Chicago.
734952. Massage apparatus. John A. Reade, Jr., Chicago.
735043. Sanitary pocket cuspidor. John Tobin, Brooklyn.

The Public Service.

Navy Changes.

Changes in the Medical Corps of the Navy, for the week ending August 15:

A. A. Surgeon P. L. Cooke, detached from the *Chesapeake* and ordered home to wait orders.

Surgeon J. M. Edgar, detached from the *Wabash* and ordered to the Asiatic Station with a detachment of marines, leaving Washington August 24.

Surgeon G. B. Wilson, detached from the Naval Hospital, Chelsea, and ordered to the *Wabash*.

Asst.-Surgeon R. W. Bachmann, detached from the *Solace* and ordered to the Naval Station, Guam.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the fourteen days ended Aug. 6, 1903:

Assistant Surgeon-General W. J. Pettus, granted leave of absence for twenty days from August 10.

Surgeon H. W. Austin, granted leave of absence for one month from August 6.

Surgeon H. R. Carter, granted leave of absence for one month from August 4.

Surgeon J. B. Stoner, granted extension of leave of absence for one month from August 1.

Surgeon J. M. Gassaway, granted leave of absence for two months from August 10.

Surgeon Fairfax Irwin, granted leave of absence for two months from September 5.

Surgeon D. A. Carmichael, to proceed to Washington, D. C., and report to director of the Hygienic Laboratory for special instructions.

P. A. Surgeon B. W. Brown, granted leave of absence for fifteen days from August 12.

P. A. Surgeon J. M. Eager, detailed to represent the service at the International Congress of Hygiene and Demography at Brussels, Belgium, Sept. 3-8, 1903.

P. A. Surgeon H. W. Wickes, granted leave of absence for one day, August 15.

P. A. Surgeon L. L. Lumsden, relieved from temporary duty at San Juan, P. R., and directed to proceed to Vineyard Haven, Mass., and assume temporary command of service during absence of Surgeon D. A. Carmichael.

P. A. Surgeon J. A. Nydegger, relieved from duty at Sault Ste. Marie, Mich., and directed to proceed to the Immigration Depot, New York, N. Y., and report to Surgeon G. W. Stoner for assignment to duty.

P. A. Surgeon J. F. Anderson, to proceed to Marietta, Conewaga and Swiftwater, Pa., and Baltimore, Md., for special temporary duty.

Asst.-Surgeon C. E. Decker, placed on waiting orders from August 1.

Asst.-Surgeon W. K. Ward, granted leave of absence for ten days from August 25.

Asst.-Surgeon C. E. Decker, granted extension of leave of absence, on account of sickness, for fifteen days from July 15.

Asst.-Surgeon T. F. Richardson, to proceed to Tampico, Mexico, for special temporary duty.

Asst.-Surgeon C. E. D. Lord, to proceed to Seattle, Tacoma, Port Townsend and Sumas, Wash., Victoria and Vancouver, B. C., Portal, N. D., and Winnipeg, Manitoba, for special temporary duty.

Asst.-Surgeon C. W. Wille, to proceed to Baltimore, Md., and assume temporary command of the service during the absence, on leave, of Surgeon H. R. Carter.

Asst.-Surgeon L. P. H. Bahrenburg, on the arrival of A. A. Surgeon Norman Roberts at Chicago, to proceed to New Orleans and report to medical officer in command for temporary duty.

Asst.-Surgeon A. M. Stimson, granted leave of absence for seven days from July 28, 1903, under paragraph 191 of the Regulations. Granted extension of leave of absence for seven days from August 5.

Asst.-Surgeon W. K. Ward, granted leave of absence for two days from July 30, 1903, under paragraph 191 of the Regulations.

Asst.-Surgeon A. D. Foster, to proceed to St. Louis and assume temporary command of the service during the absence, on leave, of Surgeon J. M. Gassaway.

Asst.-Surgeon Norman Roberts, to report to medical officer in command at Chicago for duty and assignment to quarters.

Asst.-Surgeon G. L. Collins, to proceed to the Immigration Depot, New York, and report to Surgeon G. W. Stoner for duty.

Asst.-Surgeon H. G. Ebert, to proceed to Fort Stanton, N. M., and report to medical officer in command for duty and assignment to quarters.

Asst.-Surgeon W. M. Wightman, to report to medical officer in command at San Francisco quarantine for duty and assignment to quarters.

Asst.-Surgeon H. M. Manning, to proceed to Stapleton, N. Y., and report to medical officer in command for duty and assignment to quarters.

Asst.-Surgeon F. C. Smith, to proceed to the Immigration Depot, New York, and report to Surgeon G. W. Stoner for duty.

A. A. Surgeon B. J. Brown, Jr., granted leave of absence for two weeks from August 4.

A. A. Surgeon J. M. Delgado, granted leave of absence for seven days from August 5, under provisions of paragraph 210 of the Regulations.

A. A. Surgeon F. Duffy, granted leave of absence for ten days from August 12.

A. A. Surgeon C. M. Frissell, granted leave of absence from August 6 to 18.

A. A. Surgeon R. S. Primrose, granted leave of absence for fifteen days on account of sickness.

A. A. Surgeon W. L. Savage, granted leave of absence for thirty days from August 6.

A. A. Surgeon P. N. Barnesby, granted leave of absence for one month from August 6.

A. A. Surgeon W. A. Kimmet, granted leave of absence for two days from July 25, 1903, under paragraph 210 of the Regulations.

Pharmacist F. A. Southard, on being relieved by Pharmacist C. R. McBride, to proceed to Washington, D. C., and report to the director of thee Hygienic Laboratory for duty.

Pharmacist M. H. Watters, granted leave of absence for twenty-two days from August 15.

Pharmacist C. R. McBride, to proceed to New York (Stapleton) and report to medical officer in command for duty and assignment to quarters.

Pharmacist Henry Gahn, detailed to represent the service at the fifty-third annual meeting of the Pharmaceutical Association, to be held at Mackinac Island, Mich., August 3. Reassigned to duty in the Purveying Depot, effective July 17.

Pharmacist A. M. Roehrig, detailed to represent the service at the fifty-third annual meeting of the Pharmaceutical Association, to be held at Mackinac Island, Mich., August 3.

Pharmacist W. L. Stearns, reassigned to duty at the Purveying Depot, effective July 17.

Pharmacist R. H. Gibson, granted leave of absence for seven days from July 29, 1903, under paragraph 210 of the Regulations.

Pharmacist L. W. Ryder, granted leave of absence for fifteen days from August 1.

Pharmacist M. H. Watters, relieved from duty in the Hygienic Laboratory and assigned to duty in the Bureau. To report to chairman of board of examiners at Washington, D. C., Aug. 10, 1903, for examination to determine his fitness for promotion to the grade of pharmacist of the second class.

Pharmacist L. P. Hall, granted leave of absence for thirty days from August 20.

BOARDS CONVENED.

Board convened to meet at Washington, D. C., July 27, 1903, for the consideration of the request of Asst.-Surgeon C. E. Decker to be placed on waiting orders on account of physical disability. Detail for the board: Assistant Surgeon-General A. H. Glennan, chairman; Assistant Surgeon-General L. L. Williams; Assistant Surgeon-General H. D. Geddings, recorder.

Board convened to meet at Washington, D. C., July 27, 1903, for the physical re-examination of an officer of the Revenue Cutter Service. Detail for the board: Assistant Surgeon-General W. J. Pettus, chairman; Assistant Surgeon-General H. D. Geddings, recorder.

Board convened to meet at Washington, D. C., August 10, 1903, for the examination of Pharmacist M. H. Watters to determine his fitness for promotion to the grade of pharmacist of the second class. Detail for the board: Assistant Surgeon-General L. L. Williams, chairman; Asst.-Surgeon A. J. McLaughlin, recorder.

APPOINTMENTS.

Norma Roberts, Pennsylvania; George L. Collins, Massachusetts; Harvey G. Ebert, Washington; William M. Wightman, California; Herbert M. Manning, District of Columbia, and Frederick C. Smith, Minnesota, commissioned as assistant surgeons (recess) in the Public Health and Marine-Hospital Service.

Charles R. McBride, Ohio, appointed pharmacist of the third class, Aug. 7, 1903.

PROMOTION.

G. W. Iltis, pharmacist of the third class, promoted to be pharmacist of the second class, effective April 24, 1903.

REINSTATEMENT.

William C. Phillips, reinstated as pharmacist of the third class.

SUSPENSION.

Pharmacist H. E. Davis, suspended from duty and pay for a period of thirty days from July 27, 1903.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Aug. 15, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, August 1-8, 4 cases.

California: Los Angeles, July 25-August 1, 1 case; San Francisco, July 26-August 2, 3 cases.

Massachusetts: Fall River, August 1-8, 1 case, 1 death.

Michigan: Detroit, August 1-8, 3 cases.

Missouri: St. Louis, August 1-8, 6 cases.

Nebraska: Omaha, August 1-8, 1 case.

New Hampshire: Manchester, August 1-8, 1 case.

New Jersey: Camden, August 1-8, 4 cases.

Ohio: Cincinnati, July 31-August 7, 2 cases; Dayton, August 1-8, 3 cases; Toledo, August 1-8, 1 case.

Pennsylvania: Allegheny, August 2-9, 5 cases, 1 death; Altoona, August 1-8, 1 case imported from Virginia, via Washington City; Carbondale, July 24-31, 2 cases; McKeesport, August 1-8, 4 cases.

Utah: Salt Lake City, August 1-8, 2 cases.

SMALLPOX—FOREIGN.

Belgium: Antwerp, July 18-25, 3 cases.

Ecuador: Guayaquil, June 24-July 4, 1 sporadic case.

Colombia: Bocas del Toro, July 20-28, 1 case.

Great Britain: Bristol, July 18-25, 1 case; Leeds, July 18-25, 9 cases, 1 death; Liverpool, July 18-August 1, 12 cases, 2 deaths; London, July 11-25, 19 cases; Manchester, July 18-25, 7 cases; Nottingham, July 11-25, 10 cases.

India: Bombay, July 7-14, 14 cases; Calcutta, July 4-11, 1 case.

Mexico: City of Mexico, July 26-August 2, 7 cases, 4 deaths; Tampico, August 1-8, 2 deaths.

Netherlands: Amsterdam, July 25-August 1, 1 case, 1 death.

Russia: Moscow, July 11-18, 2 cases.

YELLOW FEVER.

Colombia: Panama, July 27-August 3, 3 cases, 1 death.

Costa Rica: Limon, July 23-30, 2 cases, 2 deaths.

Mexico: Tampico, July 24-August 8, 35 deaths; Vera Cruz, July 24-August 8, 91 cases, 29 deaths; Victoria, August 10, 1 case, 1 death.

CHOLERA—INSULAR.

Philippine Islands: Manila, June 13-20, 9 cases, 8 deaths; Provinces, June 13-20, 368 cases, 319 deaths.

CHOLERA—FOREIGN.

India: Bombay, July 7-14, 1 death; Calcutta, July 4-11, 35 deaths.

Straits Settlements: Singapore, June 13-20, 6 deaths.

PLAGUE—UNITED STATES.

California: San Francisco, July 29, 1 death.

PLAGUE—FOREIGN.

Australia: Queensland, Bundaberg, June 1, 1 case.

China: Hongkong, June 17-26, 52 cases, 47 deaths.

Egypt: Alexandria, July 5, 1 death; Port Said, July 13, 7 cases; Tantah, July 9, 4 cases.

India: Bombay, July 7-14, 68 deaths; Calcutta, July 4-11, 15 deaths; Karachi, July 5-12, 2 cases, 2 deaths.

Mauritius: July 2-16, 11 cases, 10 deaths.

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Original Articles.

SKIASCOPY AS A METHOD OF PRECISION.*

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It is difficult to realize how one may understand the theory of a method, and may employ it habitually in practice, and yet may attain results of insignificant value, as compared with what might easily be reached by a little more exactness. The difference between a loose method and a method of precision may be nothing in theory and trifling in detail, but enormous in practical usefulness. A scientific method becomes a method of precision, and attains practical value by comparatively slight modifications, but these may be made or adopted very slowly.

We can better understand how slowly by looking at the history of a diagnostic procedure that is now generally relied on. It is more than three hundred years since the invention of the thermometer. About two hundred years ago it was perfected in practically its present form by Fahrenheit. Yet physicians still in active practice remember the work of Andral and Wunderlich which made thermometry a method of precision in practical diagnosis, and led to its general adoption.

Take the clinical thermometer as we have it to-day, and the literature which now gives significance to its readings: but use it with neglect of a few precautions necessary to accuracy, and the observations made with it would be worthless. Drop precision from any modern method of examination and what a farce it would become. In no branch of modern science is minute exactness of greater importance than in the measurement of the refraction of the eye.

Skiascopy has been much written about and practiced of late years. It has given results that justify this. But by attention to certain details that would render it a method of precision, its practical value would be increased ten-fold. Skiascopy is a method of physical measurement. It is capable of exactly the same certainty as measurement by the rule or balance; and upon the same condition, exactness. Such statements as it "is not trustworthy when subjective methods are possible with intelligent people," or "it is sometimes misleading," indicate merely the carelessness with which it has been used. If your thermometer be falsely graduated, or your tape measure stretches freely, and you do not know enough about them to appreciate the dangers of such inaccuracies, you may be misled by them. If you measure by skiascopy the periphery of a dilated pupil, never used in vision, and do not know that its refraction is totally different from that of the visual zone at the center of the pupil, you may be misled by skiascopy. The shadow test is trustworthy enough. It is ignorance, haste, carelessness, inexactness that are untrustworthy.

It was inevitable that this method of examination should pass through a period of development. The ophthalmoscope, which came as near being a complete discovery as any we have had, has grown enormously in practical value since its introduction. For skiascopy this stage of development has not yet passed, but it has gone far enough for us to place the shadow-test among our methods of precision. The time for being content with a general comprehension of its theory, and teaching it in a rude, diagrammatic way has passed. Recognition of it as a practical test should be given henceforth only as it takes the form of a method of precision. If one has no tape measure he may estimate length by spanning with his hand or counting paces. If the conditions for accuracy are for the time impossible, one may practice approximate skiascopy. But it should be recognized that this is not all that skiascopy might be.

The first step toward rendering skiascopy a method of precision is the shortening of the distance between the patient and surgeon. We do not try to recognize the diplobacillus or the gonococcus with a magnifying power of two hundred diameters or less. Why should we try to practice skiascopy at the distance of one meter, where it is impossible to recognize appearances which must be recognized in order that the skiascopic determination of the refraction shall be accurate?

The shadow-test is practiced with a pupil of from 4 to 8 mm. in diameter. A letter inscribed in a circle of that size would be recognized at a distance of 2 to 4 meters in a good light. With the strongest illumination of the pupil the movements of light and shadow can be recognized readily at the same distances. But the strongest illumination is not available for accurate skiascopy. The conditions which give the most brilliant reflex from the pupil differ essentially from those under which the refraction can be exactly measured. As the point of reversal is approached the illumination of the pupil becomes feeble, and for a fair approach to exactness, say within 0.25 D., the light in the pupil becomes so feeble that the direction of its movement can not be recognized at one meter, even when the movement extends over the whole width of a pupil 6 or 8 mm. in diameter. Skiascopy at one meter can not be certain. The correctness of measurements made at that distance can not be relied on. They may be accurate by chance, but they are not accurate with certainty.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

Moreover, in the great majority of eyes, the movement of light and shadow has to be determined, not in the area of the whole pupil, but in an area much smaller, a circle of 3 to 5, instead of 6 to 8 mm. in diameter. Then in this smaller circle one has to watch the movement of a comparatively dim light area, while around it a larger and more brilliant area is also moving. The folly of getting so far away that it is difficult or impossible to recognize this important central movement, has greatly lessened the practical value of the shadow-test.

The reasons that this folly has continued so long, and has been so general, are not difficult to imagine. If you wish to make skiascopy a method of precision, you must be careful as to all its details. The source of light must approximate as closely as possible a mathematical point. The distance between surgeon and patient must be measured exactly. But if the surgeon goes far enough away from the patient's eye, it makes very little difference whether his source of light be large or small, and he need not measure the distance from the patient at all, but merely guess at it or make a fixed deduction.

If skiascopy is not to be a method of certainty and precision, but only a rough and approximate test, the loose, easy, careless way of practicing it will answer. But it ought to be generally understood that this loose method no more exhausts the possibilities of skiascopy than did the old methods of the alchemists exhaust the possibilities of the chemical examination of urine.

The time will surely come when our profession will appreciate the value of an objective method of exactly measuring refraction, and will hold in light esteem the scientific judgment of a generation that failed to appreciate that value. But until such a method of precision is appreciated, not even the most reasonable and obvious of its essential conditions is likely to be generally observed.

The need of measuring the distance between surgeon and patient has already been alluded to. When the distance is so great that a foot added to it will mean but 0.25 D. difference in the refractive power, such measurements are unnecessary. But when a single inch means more than 0.25 D. of refractive power, the need for exactness is obvious.

The size of the retinal light area obtained with a certain source of light is inversely proportioned to its distance. If the source of light be kept of the same size and brought nearer to the patient's eye, the delicacy of the test will be diminished rather than increased because of the enlarged retinal light area. A source of light I cm. in diameter, used at ten inches, will be as inaccurate as a source 4 cm. in diameter, at one meter. For working at one-quarter meter we must reduce the diameter to 2.5 mm. or less. The need to give the sight-hole a sharp edge and circular form is generally appreciated. It becomes even greater as skiascopy is rendered a method of precision.

The reduction in the size of the source of light renders necessary a reduction in the sight-hole, to prevent the reflected light point from being largely or completely swallowed up in it. The sight-hole should be not more than half the diameter of the source of light. Of course, with such a sight-hole its freedom from reflection, which should always be aimed at, is essential.

When skiascopy has been developed and modified in these respects, still other things assume practical importance. The room must be thoroughly darkened. The more delicate movements of the faintly illuminated area in the pupil can only be perceived when the surgeon's retina has become adapted to a faint light. Then, too, this faint illumination must not be overcome by reflexes from the trial lenses in front of the patient's pupil. The light must be so thoroughly cut off that no reflection of the surgeon's hand, or face, or other object can interfere with the watching of the pupillary movement.

To get the rays entering through the patient's pupil accurately focused on the retina, the source of light has to be brought as close as possible to the mirror, and this position brings it also comparatively close to the patient's face. When the distance between surgeon and patient is reduced to 12 inches or less, this renders worth while a double metal shade, which will prevent unpleasant heat from the flame.

To fix exactly the principal meridians of astigmatism, special arrangements are required. The correcting cylinder turned to its proper meridian often serves the purpose. But for higher degrees of astigmatism (more than 0.50 D.) the wire stretched in front of the pupil, as suggested by Finch, is more satisfactory.

So many of these points must be attended to if we would render skiascopy a method of precision, and so interdependent are they, each losing most of its value when not used in connection with the others, that it seems proper to recognize a special form of the shadow-test as exact skiascopy. This we can do while fully appreciating that in essential theory and general character it is identical with the shadow-test in general. It is distinct in the sense that perimetry is distinct from measuring the field of vision with the fingers or by other methods; or as the refraction of the ophthalmoscope is distinct from the original Helmholtz or Liebreich ophthalmoscopes.

We would indicate by the term exact skiascopy:

The working at a distance of one-quarter to one-half meter.

The accurate measurement of the distance.

The adaptation of the source of light and the sight-hole to this distance.

Care to bring the source of light close to the conjugate focus of the retina.

Means of fixing exactly the direction of the principal meridians.

Control testing, by departure both ways from the lens' strength, focal distance, or meridian fixed on.

And, in general, precision and exactness in every detail.

Such a method of examination is capable of sufficient accuracy for ordinary practical purposes. It will fix the error of refraction within one-quarter diopter, and in many eyes within one-eighth diopter, and the direction of astigmatism within 5 degrees when the astigmatism amounts to 0.75 D. or over, and within 15 degrees when it is only 0.25 D.

In recognizing the fact that skiascopy will not determine the refraction of all eyes with equal accuracy, it must be remembered that this is true of all methods of measuring refraction, and most true of those that give the most exact results, especially the subjective test with trial-lenses and test-letters.

It is not admitted that skiascopy is in this respect inferior to other methods. As a matter of fact, it can be relied on more completely than any other method now in use. Having made the skiascopic examination, one can judge far better of the amount of confidence to be placed in its results, than he can judge of the value of the results obtained by the subjective methods or with the refraction ophthalmoscope. The illuminated pupil shows not only a certain error of refraction; it shows also whether the refraction is the same throughout its whole area, or throughout a definite visual zone. If this be not the case, so that some uncertainty attaches to the measurements made in any particular case, exact skiascopy reveals this fact also, and thus guards against undue confidence in its own findings.

DISCUSSION.

Dr. O. A. Griffin, Ann Arbor, Mich.—Subjective tests are certainly unreliable in a great many instances, and to secure satisfactory results other methods must be employed. When we remember that 90 per cent. of ametropes are astigmatic, one-quarter diopter or more; that a sphere will improve vision in astigmatic conditions up to about one-half of the measure of the error, and that normality of sight does not exclude the existence of small refractive errors, especially astigmatic, we must depend on a more reliable method than that furnished by the uncertainty of a patient's judgment.

It is important, as Dr. Jackson has indicated, that we follow the method in all its details in order to secure accurate results. I often find refractionists disappointed with the method simply because they do not understand how to use it. Instead of watching the movements of the shadow in a small central area, they observe the cornea as a whole. In some cases where there is an unusual amount of spherical aberration the scissors-like movements of the shadow will prove annoying, when the peripheral movements should be ignored, as the rays do not pass through this area when the pupil is normally contracted.

I am somewhat surprised that Dr. Jackson discredits the accuracy of results obtained at one meter. I make all my estimations at that distance, and in the majority of instances can easily differentiate between a quarter and eighth diopter of error. There are cases where we meet with opacities of the media or sufficient irregular astigmatism to interfere with the test; but fortunately these conditions are rare, and do not interfere enough to condemn the method.

It is, I think, in the correction of strabismic ametropias that skiascopy proves of exceptional value. If strabismus is produced by ametropic conditions, then it is imperative that these errors should be corrected early. If one depends solely on subjective tests, as is too often the case, the ametropia can not be properly estimated until the child becomes old enough to read, by which time an irreparable amblyopia has often occurred, whereas with the skiascopic test the condition can be corrected as soon as it shows itself. I have often employed the method in refracting children of tender years, and think it exceedingly fortunate that we have such a reliable objective test at our command. The statistics show, I believe, that fully one third of strabismic conditions can be remedied by an early correction of the ametropic condition alone. If this be true, the importance of objective tests can not be overestimated.

Dr. Harold Gifford, Omaha—I do not understand why the author speaks of the visual "zone." Why not call it visual area instead of visual zone. This area is not a belt around a sphere, as that name would indicate, and the area is often not even circular.

Dr. Wm. H. Wilder, Chicago—Although I appreciate the value of the method of skiascopy advocated, and while there is no question of the method being the most accurate means of testing the refraction, it seems to me in most cases an unnecessary refinement because of being more laborious. I am sure that anyone with care and skill at a distance of one meter can get as close as a quarter diopter to the refraction of almost every case. I feel satisfied whenever I am within a quarter diopter of the actual truth. That is close enough for all practical purposes, for with that you can prescribe with safety in children unable to read. Of course, the subjective test at the reading chart is the final one. I make use of the concave mirror, with the light behind the patient's head. The error is only slight at a meter as compared with that which may occur at a distance of 20 to 30 centimeters.

Dr. C. W. Hawley, Chicago—I think perhaps some will misunderstand Dr. Jackson's paper. I do not believe he means that for practical work the examination must be done with the accuracy of which he speaks, but that he is pointing out the manner in which it must be done in order to correspond scientifically with other methods of accuracy. I know it can be depended on. A distance of one meter is what most of us use, but we find that sometimes we must get a little nearer or a little further away; that is a matter learned only by experience. As to the correction of one's own error of refraction, that is a matter of special importance to older men. A man who is a presbyope must correct that condition up to the distance at which he works. That I have learned by my own practical experience. While in London a certain physician gave it up in disgust, and I have never known until the last few years why he did so; it was because he was a presbyope and had not corrected that condition. When I became a presbyope I began to get very inaccurate, and could find no reason for it, when it dawned on me one day to correct my presbyopia, and it was a revelation to me. At about the same time I taught one of my friends to use the method. He was very much like my friend in London and was about to throw it aside. I asked him if he had tried using his glass correcting his presbyopic condition, and he said he had not. He had his lens placed at the back of his mirror and now does retinoscopy with pleasure and accuracy. Place on the back of your mirror a little frame for the lens, or have a permanent lens correcting the presbyopia at the distance at which you ordinarily do retinoscopy attached to the mirror. Those who have a large amount of astigmatism and hypermetropia must, of course, do the same.

Dr. Edward Jackson, Denver—With reference to the point raised by Dr. Hawley as to the correction of presbyopia, of course the correction of one's own error is only important as giving him distinct vision. When we attempt to use the method with accuracy we work up to the limit of visual acuteness and must have perfect vision to get the best results. As for myself, I have trouble with the ocular muscles more than with the accommodation. I find the illuminated pupil getting off on the brow or cheek as seen with the other eye. I have sometimes thought of adapting a prism behind my mirror as Dr. Hawley has adapted the lens. A small amount of presbyopia may give trouble.

As to Dr. Gifford's remark about the visual zone, I think zone may be used to designate that kind of an area. It is a circle within a circle. It is a circular area around the axis which I refer to as the normal visual zone.

As to the matter of working at a distance of one meter: You can not be sure of the amount of astigmatism within a quarter diopter at that distance. You may determine it in many eyes, but not in all. If you want to be accurate in every case it will be worth while to use the method which can be most accurate and most easy. At a half meter or less you can recognize everything more readily. The observed pupil is three or four times the area that you get at one meter. Perhaps the most important thing is the fixing of the axis of astigmatism, especially of low degrees. For that we have no other method approximating in exactness this method of skiascopy.

Local Treatment of Rheumatism.—Testimony is accumulating in our European exchanges that the local application of the methoxymethylester of salicylic acid has a remarkably soothing effect on rheumatic pains. In cases of rheumatism due to getting chilled the pains are banished by rubbing the part with a teaspoonful or tablespoonful of the drug, either pure or in a 50 per cent. oily solution. In obstinate cases of rheumatism it effectively supplements internal salicylic medication and relieves even chronic, hopelessly rebellious cases. It has not proved effective in neuralgia, but has been very useful in the declining stage of acute articular rheumatism, etc. It is put on the market under the name of Mesotan.

RETINAL DISEASE LIMITED TO THE REGION OF THE FOVEA.*

HENRY GRADLE, M.D.
CHICAGO.

In the course of years there have come under my observation five instances of disease of the retina sharply limited to the fovea and its immediate neighborhood. As I am not aware of any similar observation on record the cases seem to me to be worth reporting on account of their diagnostic interest. The only analogous disease resembling this affection is the central retinitis with scotoma caused by sunlight; for instance, while watching an eclipse. Since the cases observed by me were alike merely in localization, but different in clinical course and presumably in etiology, I see no object in generalizing, but shall only comment on the individual observations.

ACUTE CENTRAL RETINITIS WITH RECOVERY.

Case 1.—Mr. N., a man of 45 years, in good health except for some dyspeptic symptoms, had complained lately of beginning presbyopia. He awoke one morning and saw a shadow in front of the left eye with slightly blurred sight. Two days later I found the sight in left eye 20/50, in right eye normal with a weak cylinder. He drew the brown shadow in the form of a horizontal ellipse with sharp outline extending about 3 deg. to the temporal and 6 deg. to the nasal side of the point of fixation. Within the scotoma all colors appeared faded. The fundus was not absolutely normal in both eyes. The papillæ were more injected than normally in both eyes and their edges not sharply defined. The central area of both retinæ showed a number of barely visible minute white but not glistening specks irregularly scattered. In addition, there was seen in the left eye and not in the right, a distinct though faint cloudiness of the region around and especially above the fovea. Media normal. Pilocarpin was ordered once a day, and a mild purge of calomel every second day.

Within the next ten days the shadow grew fainter, although it expanded a trifle at first. His sight rose to 20/30. The retinal cloudiness cleared visibly. About one week later (2½ weeks after the onset) the eye seemed to him normal. Three months later the retina of the left was as normal as that of the right eye. Both still showed the few white specks, but the optic discs were practically normal. His sight, corrected by cyl. +0.75, was 20/20 minus. No relapse after several years.

The lesion in this case was evidently an exudate in the anterior layers of the retina. For a shadow seen subjectively, or in other words, a positive scotoma, can only be caused by an opacity anterior to the sensitive layer of the retina. The retinal infiltration as seen by the ophthalmoscope appeared more diffuse than the sharply-defined scotoma. It seems logical to call the lesion a central circumscribed retinitis. Nothing could be ascertained as to its cause or the reason of its localization. It is impossible to say to what extent the recovery depended on the treatment. My general experience in various forms of neuritis and retinitis leads me to credit the calomel largely for the success, while I have lost all faith in the efficacy of pilocarpin.

ACUTE CENTRAL RETINITIS WITH RECOVERY, BUT SUBSEQUENT RELAPSE.

Case 2.—Mr. S., active business manager, in good health, 55 years old, noticed one day a small brown shadow before the right eye with a heavy feeling and slight blurring. Two weeks later I found the left eye normal subjectively and objectively. The sight of the right eye was barely 20/40, while it had formerly been 20/20 minus with cyl. +05D. He draws on paper the circular outline of a shadow of about 4 deg. radius. The center of the retina of the right eye showed two oval spots, one above the other (like a figure 8), each about one-sixth of a papillary diameter, yellowish, sharply defined, but very faint and surrounded by a zone slightly darker than the rest of the fundus. Fovea as such not visible.

After a dose of calomel and the use of dark glasses vision rose to 20/30 in two days. He was unable to tolerate iodin, but took a few more doses of calomel. Within two weeks the shadow was gone, vision was normal and the morbid figure in the retina could scarcely be recognized.

Eighteen months later the same shadow reappeared in the right eye and vision again dropped to 20/30. The ophthalmoscope showed a yellowish discolored spot again involving the center of the retina, more irregular in outline than before, about one-fourth papillary diameter with more pigment granules in it than formerly. Again the shadow and blurring disappeared almost completely in two to three weeks under the use of calomel every second or third day, but the fundus lesion did not change. He told me subsequently that his vision was normal, but that a very faint shadow was still noticeable. I got no opportunity, however, to examine him with the mirror.

The comments made on Case 1 apply equally to this patient. The lesion, however, appeared different ophthalmoscopically, probably on account of some changes in the retinal pigment epithelium. The following case resembles Case 1 more closely, but unlike the other two, did not end in recovery:

Case 3.—Mr. B., 40 years of age, healthy and with negative history, claims to have noticed a shadow with blurring about six months ago. He was treated by another oculist without improvement. The affected eye (the other being normal) has V.=20/50. He describes a gray shadow nearly crescentic and just below the point of fixation. It did not seem to be quite 5 deg. wide as indicated on the perimeter. The retina showed a fairly circumscribed grayish cloudiness, approximately semicircular, upward from the visible fovea. I did not see the patient again.

In all these instances the lesion was evidently of inflammatory origin and involved only one eye. The next case, however, showed symmetric lesions in both eyes. Neither the nature nor the time of occurrence of the disease could be learned, since only its permanent residues were seen.

Case 4.—Mrs. S., now 37 years old, has always had poor sight, especially in the evening. Either eye has but 20/200 vision. According to all objective as well as subjective tests cyl. —2.5D. axis 110 deg. with sph. +0.75D. corrects the right eye perfectly and C.—1.75D. axis 90 deg. with sph. +0.75D. the left, but with this correction she scarcely reaches 20/100. The only anomaly shown by the ophthalmoscope is a very faint but unmistakable central lesion. The fovea as such is not recognizable in either eye, but on central fixation the foveal region, about ¼ papillary diameter, is seen a brighter red than the rest of the fundus, perhaps more so by reason of contrast, as this light red area is surrounded by a narrow zone of abnormally dense pigmentation.

The poor sight of this patient could not be accounted for by any optic reason, but is evidently explained by damage done in the center of the retina by some former possibly pre-natal disturbance. There was neither a positive nor a negative scotoma demonstrable, but simply imperfect function of the foveal region with integrity of color sense and of peripheral acuity of sight.

The last observation pertains to an insidious degenerative disease, also limited to the exact center of the retina.

Case 5.—Mr. S., 42 years old, and in perfect health, was seen in October, 1894, on account of slight asthenopia and imperfect sight. The findings were: R. E., V.=20/70, with —0.75D. and cyl. —0.5D. axis 100 V.=20/30; L. E., V.=20/80, with —1.5D. and cyl. —1.D. axis 60 V.=20/20 minus, which glasses were given. Four years later slight failure of the right eye caused him to return, when the corrected sight was found to be only 20/40. In 1899 it was not quite 20/50, without any change, however, except presbyopia in the left eye. At all these occasions a painstaking ophthalmoscopic examination, however, without dilatation of the pupil, revealed no anomaly. In November, 1901, after an interval of seven years, the sight of the right eye with full (unchanged) correction had sunken to 20/70. On dilating the pupil the only lesions to be seen were slight opacity in the extreme periphery of the lens and two spots each under ⅕ papillary diameter, one occupying the site of fovea, the other almost adjoining it. The spots were poorly defined, faint yellow in color, with scarcely noticeable increase of retinal pigmentation at the periphery.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

There was in this case at no time any sudden disturbance of sight. The lesion was evidently of degenerative character, and of slowly progressive nature.

DISCUSSION.

DR. W. L. DAYTON, Lincoln, Neb.—The first two or three cases mentioned by the essayist simulate the changes at the macula that may occur with senility. The age of his patients, however, would not naturally warrant us in assuming this, yet I do not remember that he spoke of the refraction. It is possible even at that age that a very hyperopic eye might have some influence on this condition inasmuch as the changes in the fovea from senility undoubtedly occur in the nerve and pigment epithelium of the retina, and it appears to me possible for such changes to occur in the cases stated. I had a case somewhat similar to this third one under observation several years ago; a case of pernicious anemia, where the spot appeared to me as if it had been a hemorrhage of long standing—not black, but more of a reddish brown. The patient succumbed to the pernicious anemia. In retinal disease limited to the macula lutea there are a number of conditions that should be carefully studied. There are cases where foreign bodies have entered the vitreous and where some weeks afterwards there appear changes in the macula. This is important, too, because we may have to deal with the condition from a medicolegal standpoint, as bearing on accident insurance, etc. The changes may not appear until some weeks after injury, or extraction of a foreign body. We may find no evidence of foveal disturbance, and then after the eye has assumed its normal condition find changes about the fovea. We may think that we have to deal with a malingerer, and then a month or so later these macular changes be very evident. I have in mind a case where such changes about the fovea occurred, yellowish-white in appearance, three months after the injury. Then, as Dr. Gradle has said, there are changes in the macula in retinitis due to the effect of electric light, and there we get a similar condition. There is another condition that I would mention in this connection, and that is where there is but little disturbance of vision and where the ophthalmologic appearance is that of small white dots. This condition may not reduce vision to more than 20/25, and yet present this peculiar appearance. I have never been satisfied as to what the condition is.

DR. LEARTUS CONNOR, Detroit—I have observed a somewhat different case, in a physician 40 years of age. The history showed at a previous examination a healthy eye, until within two weeks of the time I saw him, when suddenly in his left eye central vision disappeared; peripheral vision was normal. A peculiarity he described was this: that this spot which he saw was alive, and he described and drew on paper the various movements observed subjectively; their outline was oval in shape, progressing from the center toward the border in all directions. The drawing I made from the ophthalmic picture corresponded with that made by the patient. Two months later his central vision had become 20/200 and was apparently improving. Evidently it had involved the entire structure of the retina and the cellular elements were in a state of activity during that period. Whether treatment had any effect or not I do not know. He had been a perfectly healthy man with no constitutional taint, but he had overworked while neurasthenic.

DR. C. W. HAWLEY, Chicago—I was much interested in the paper because it calls to mind three cases I had thought of reporting. The conditions about the macula are not exactly like those described by Dr. Gradle, except in one case. The three cases occurred in ladies and came under my observation some two or three months apart. The conditions about the macula were very much like those which occur in albuminuric retinitis less the hemorrhages. I treated the first case for some time and without much improvement. It finally passed into the hands of an irregular practitioner, was treated for constipation and the patient returned home cured, the macula having returned to its normal condition. The next case was similar and I turned it over to a general practitioner, with the same result. He treated the intestinal tract and the condition cleared up. The third case was very much the same, and all three were treated as to the intestinal tract. No investigations were made as to what the nature of the poison was, but I am sure the condition resulted from the intestinal poisoning.

I understand that Moses Gunn has described some cases very similar to these. I am sure Dr. Gradle's success is due to the doses of calomel he gave.

NEUROGLIA TISSUE AND EPENDYMAL EPITHELIUM IN TERATOID TUMORS.*

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BOSTON.
(From the Sears Pathological Laboratory of Harvard University, and the Pathological Laboratory of the Boston City Hospital.)

In pathology the advances by which our knowledge of any subject is obtained often take the form of a wave. An epidemic occasions renewed interest and furnishes abundant fresh material; a new technical procedure stimulates investigation and invites the reëxamination of accumulated material: the result is a series of contributions revealing new facts concerning the subject. Such a period of activity was inaugurated in the study of neuroglia tissue by the publication in 1895 of the staining methods of Weigert[1] and of Mallory.[2] Since then has come most of our knowledge of this tissue. Many investigators have been engaged on its problems, and other staining methods have been introduced, but none of these differential methods appears to have been applied to any extent in the examination of similar elements in teratoid tumors. In a teratoma of the ovary, some features of which have already been published,[3] a large amount of neuroglia tissue was found. This finding occasioned the investigation of other tumors of this class with particular reference to neuroglia elements. As in these tumors structures related to neuroglia occur and by the application of various neuroglia staining methods other elements than neuroglia fibers are brought out, it has seemed well to consider all of these in this study. Hence neuroglia fibers, neuroglia cells, ependyma, dots and fibers which stain by the neuroglia staining methods and retina-like structures will here be described and their significance discussed.

Teratoid tumors have from earliest times received much attention. A great variety of forms has been described and all kinds of tissue, including the elements of the central nervous system, have been found in them. Their rate of growth and the symptoms due to their presence in various regions have been investigated. The contributions made to the various aspects of the subject have been reviewed repeatedly and it is not necessary to do so again at this time when it is our intention to consider mainly the histology of the neuroglia and of the ependymal epithelium in some of these tumors.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Pathology and Physiology, and approved for publication by the Executive Committee: Drs. L. Hektoen, F. B. Wynn and W. S. Hall.

[1] Weigert: Beiträge zur Kenntniss der normalen menschlichen Neuroglia, Frankfurt a. M., 1895.

[2] Mallory: Ueber gewisse Färbereactionen der Neuroglia, Centralbl. f. allgemein. Path., 1895, vi, 753.

[3] Christian: Ependymal Epithelium as a Constituent of a Teratoma. Medical Reports of the Boston City Hospital, 1902, xiii, 161; Boston Med. and Surg. Journal, 1902, cxlvii, 673.

There were available for this study twenty teratoid tumors preserved in a way suitable for the application of neuroglia staining methods. Of these, 18 were from the ovary, one from the lung, and one from the anterior mediastinum. The tumors vary much in size and shape. Some consist of a single cyst with a solid ingrowth; some are solid cystic structures; others a combination of the two. All contain islands of bone and cartilage, some teeth. In six neuroglia was found. Of these, tumors 1, 2, 4, 5 and 6 arose in the ovary, tumor 3 in the lung. However, the possible presence of neuroglia in the others can not be denied, as it is manifestly impossible to exclude small areas of neuroglia except by serial examination of the tumor and this for such large tumors would be excessively laborious. For this reason and owing to the comparatively small number examined, these observations have no statistical value as to the frequency of the presence of neuroglia elements in teratoid tumors. They do show, however, that this tissue is of quite frequent occurrence in tumors not specially selected for complexity of structure.

Material from all of these tumors was fixed and preserved in 10 per cent. of formaldehyd. From some material was fixed in Zenker's fluid and preserved in 80 per cent. alcohol. Material fixed in formaldehyd was stained by Mallory's phosphotungstic acid hematoxylin method,[4] Mallory's modified fibrin method,[5] and Huber's modification of Benda's method of staining neuroglia.[6] That fixed in Zenker's fluid was stained by Mallory's anilin blue connective tissue stain[4] and the acid fuchsin potassium permanganate method very recently introduced by Mallory.[7] A number of variations and modifications of these methods were also employed and gave some interesting pictures. Besides these, alum hematein and eosin, or eosin and Unna's alkaline methylene blue were used. As many of these methods as possible were utilized in the study of each tumor.[*]

Neuroglia tissue is most abundant in tumor 1. The tumor consists of a single large cyst, with epidermal lining and an equal amount of tissue containing innumerable cysts, varying in size from very minute ones to those measuring several cm. in diameter. Between the cysts the neuroglia is scattered in masses of varying size and shape. None of these exceeds 1 cm. in greatest diameter. Most are very much smaller. Many of the areas are sharply circumscribed from the surrounding connective tissue. Into others strands of connective tissue penetrate or, on the other hand, a band of neuroglia makes its way for some distance from an otherwise sharply contoured mass into the surrounding connective tissue. Less often there is so intimate an intermingling along the border of the two tissues that the limits of the neuroglia can with the greatest difficulty be made out. In some sections single fibers or groups of several parallel fibers which resemble neuroglia fibers are found in the midst of connective tissue. These fibers are either fine or coarse, and have the same general direction as the surrounding connective tissue fibers. They may bear no relation of continuity to any mass of neuroglia tissue, and may be unaccompanied by any cell differing in appearance from the ordinary type of connective tissue cell.

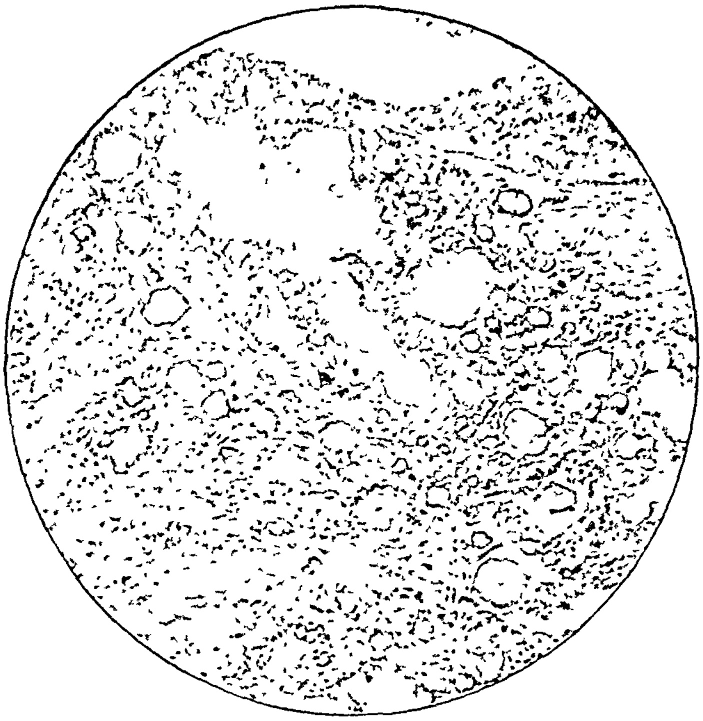

Fig. 1.—Corpora amylacea in neuroglia tissue.

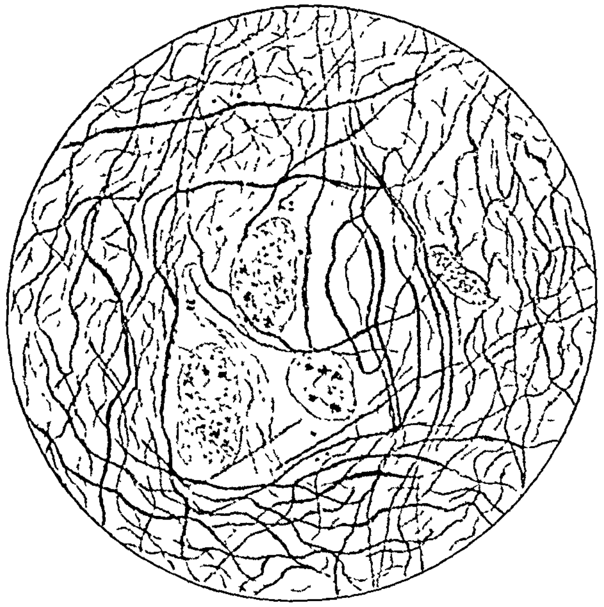

Fig. 2.—Meshwork of neuroglia fibers, some coarse, some fine. Four neuroglia nuclei, two of which are eccentrically placed in a distinct cytoplasmic body. In the cytoplasm of one of these is a "dot" near the nucleus.

The relation of the neuroglia to the cysts varies. Many neuroglia masses are entirely separated by connective tissue from the cysts. Others abut on or project into cysts. Some cysts are completely surrounded by neuroglia. There may be a large cyst with a comparatively thin layer of neuroglia about it or cysts of varying size may lie in the midst of large masses of neuroglia. Where the neuroglia is adjacent to a cyst it may be naked or covered by epithelium. The epithelium covering the neuroglia is of two general types. The one is flat cuboidal and lies immediately on neuroglia fibers, though none penetrates between them; the other is of high cylindrical type, and between these neuroglia fibers often penetrate to a varying distance. Between these two types of cells are intermediate forms.

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[4] Mallory: A Contribution to Staining Methods, Jour. of Exp. Med., 1900, v, 15.

[5] Mallory and Wright: Pathological Technique, Philadelphia, 1901, 328.

[6] Huber: Studies on the Neuroglia, Am. Jour. of Anat., 1901, i, 45.

[7] Mallory: A Hitherto Undescribed Fibrillar Substance Produced by Connective Tissue Cells, read at a meeting of the Am. Assoc. of Pathologists and Bacteriologists, Washington, D. C., May 14, 1903; to appear in Journal of Medical Research.

[*] Weigert's method of staining neuroglia was tried, but satisfactory results could not be obtained. This may have been due to the fact that the tumors were not hardened soon enough after removal from the body or that the reagents used by me differed in some way from those originally employed by Weigert. On this account deductions made by me in regard to neuroglia staining methods are not to be taken as applying to the Weigert method.

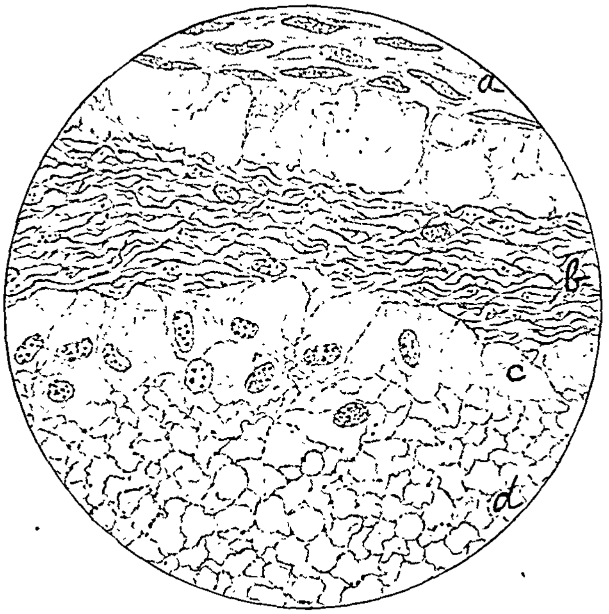

Fig. 3.—Neuroglia tissue. (*a*) Band of surrounding connective tissue. (*b*) Band of quite fine neuroglia fibers in general, running longitudinally and enclosing few cells. Between (*a*) and (*b*) there is a space due to shrinkage of tissue. (*c*) Layer of large neuroglia cells with eccentric nuclei. (*d*) Loose meshwork of fine neuroglia fibrils enclosing few cells. In this figure the dots represent cross sections of fibers.

Tumor 1 shows greater complexity of neuroglia structure than the others. In tumor 2, with the same division into a large cyst and a solid portion, as in tumor 1, much less neuroglia is present. The solid portion of this tumor consists largely of small irregular cavities and spaces, into which project papillary processes covered by high cylindrical epithelium containing goblet-like cells. In this respect it resembles a papillary adenocystoma of the type which is very common in the ovary. Besides this structure, in a few places are small cysts whose walls are lined by neuroglia. Tumor 3 shows numerous cysts, but the neuroglia tissue bears no close relation to these. It is sparingly present as small, irregular masses lying in connective tissue and sometimes abutting on a cyst.

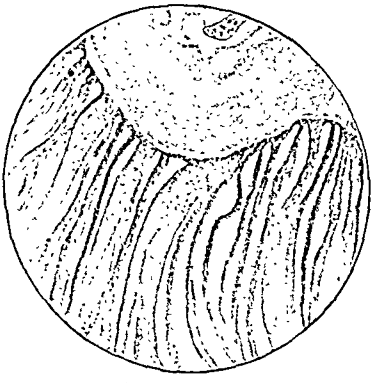

Fig. 4.—Coarse neuroglia fibers ending in an expanded foot adjacent to a hyaline band of connective tissue. From base of so-called rosette.

In tumor 4 the neuroglia is present in relatively large masses. In one of these masses there is a central elongated cavity, which is not lined by epithelium. From this larger mass, bands of neuroglia extend into the surrounding tissue. In many places there is a very intimate intermingling of neuroglia and connective tissue fibers. In other places the two tissues are sharply demarcated. Tumors 4 and 5 each consist of a large cyst, whose wall is not very thick. In this wall lie small, rounded masses and elongated bands of neuroglia. In one of the tumors numerous corpora amylacea of irregular size and shape are present in the neuroglia tissue (Fig. 1). In tumor 6 a single mass of neuroglia measuring 3 to 4 mm. in diameter is seen.

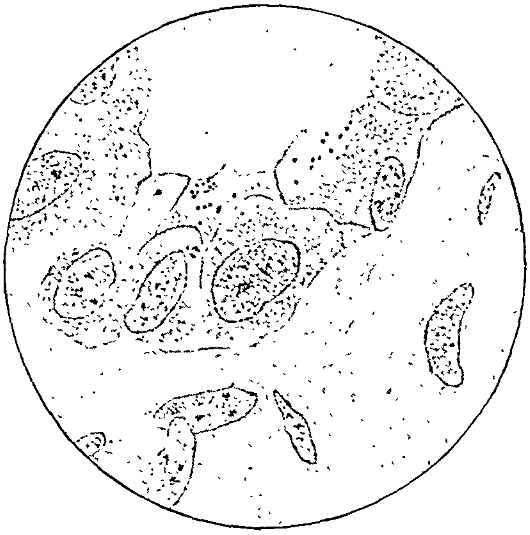

Fig. 5.—Part of a cyst lined by irregular cuboidal cells. In inner border of these are groups of "dots." In vicinity of cyst there is no neuroglia tissue. Section cuts cyst obliquely.

In the smaller neuroglia masses of all these tumors blood vessels are generally not present. In the larger masses they are found in moderate number and surrounded by a slight amount of connective tissue.

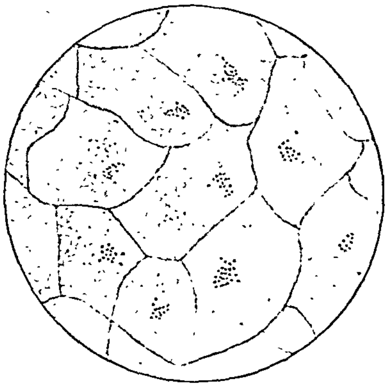

Fig. 6.—Groups of "dots" situated in the central end of cells lining a space. Section cut so as to give a view looking down on the top of the cells. Pale halo about some of the groups.

The appearance of the neuroglia in different areas is very various. The fibers differ in size and direction, the cells in form and frequency, and these differences are combined in an almost endless variety of ways. On the one hand we have masses of cells with but few fibers, on the other hand masses of fibers with infrequent cells. In neither extreme is the picture similar to that found normally anywhere in the central nervous system, though both resemble types of gliomata. The most frequent arrangement is a coarse irregular meshwork of fibers, some fine, some coarse, crossing each other in all directions (Fig. 2). Scattered among these fibers cells are rather infrequent.

Instead of this arrangement, in many places, especially at the periphery of neuroglia masses, there is a more regular compressed meshwork of fibers having, in general, a parallel course (Fig. 3, b). Here nuclei are less frequent. Where these fibers are fine, the structure resembles that of the normal subpial and subependymal neuroglia.

A further modification in this direction results in bands of fibers, almost all of which run in the same direction and have practically a parallel course. In one or two instances these fibers are quite coarse and are interspersed with cuboidal cells roughly arranged in columns. This bears a slight resemblance to the arrangement of cells and fibers sometimes seen in tendons.

In places, instead of the interlacing fibers at first described, we have a finer meshwork of more delicate fibers and rather indefinite granular material, with nuclei widely scattered and generally having but little cytoplasm (Fig. 3, d). This arrangement of neuroglia fibers is similar to that found in many parts of the cerebral cortex.

The individual neuroglia fibers do not vary in diameter in different parts of their course and do not branch. Different fibers vary greatly in size. Some are very fine, others coarse, and some appear as narrow bands. In many areas the fibers are of approximately the same size (Fig. 3). In some the fine and coarse are mingled together (Fig. 2). For most fibers no definite method of ending is apparent; they apparently end abruptly or pass from the level of the section. Some, like those in the so-called rosettes, to be described later, end by an expanded foot applied to connective tissue (Fig. 4).

The cells, like the fibers, present a variety of appearances. Many have rather small, deeply staining, round nuclei, about which little or no cytoplasm can be made out (Fig. 3, b). Some, on the other hand, have abundant cytoplasm, though when the cytoplasm is abundant the nucleus is apt to be larger, oval or slightly irregular, and vesicular (Fig. 3, c). The larger nuclei contain a distinct rounded chromatin mass, besides scattered fine granules. Some nuclei are elongated or even spindle-shaped; where they have a narrow cytoplasmic zone around them they resemble the cells of dense connective tissue. A few of the larger cells possess two or three nuclei. Sometimes the smaller cells are closely packed in a rich network of fibers. At other times the large cuboidal or irregular cells lie close together, separated only by an occasional fiber (Fig. 3, c). In some places the picture is one of closely packed polygonal or elongated epithelial-like cells, with very few intervening fibers.

A number of the cells possess protoplasmic processes, but these are not very prominent. The fibers may be widely separated from the cytoplasm of a cell, and their closest relation appears to be one of contact, rather than of continuity. The cells have no cell membrane, and, whether round, oval, cuboidal, or irregular, their cytoplasm is rarely sharply demarcated, but gradually fades out at the periphery.

What is of particular interest is the presence in very many of the cells in the areas of neuroglia tissue of small dots, staining in the same manner as the neuroglia fibers. Often there is but one (Fig. 2). Sometimes there are two lying close together. Very frequently there are five to fifteen scattered in the cell or grouped together. They may have any position in the cell; sometimes they lie close to the nucleus, sometimes remote. Many times they are surrounded by a halo staining more palely than the general cytoplasm. Very rarely short rods, instead of dots, occur. These same dots occur also in the epithelium of the cysts of the first tumor. Here they occur in the inner border or between the nucleus and inner border of the cells (Fig. 5). They can be best seen when the section cuts the cyst so that a view of the top of the cell is obtained (Fig. 6). The cysts which these cells line vary in size. They may be minute, representing a small space or lumen in a group of cells, or they may be large. The cysts may have neuroglia in close proximity, or none be adjacent. In some cysts neuroglia fibers penetrate between the lining cells (Fig. 7). Of these cells some are low and cuboidal, and others high and cylindrical. Not infrequently in cili-

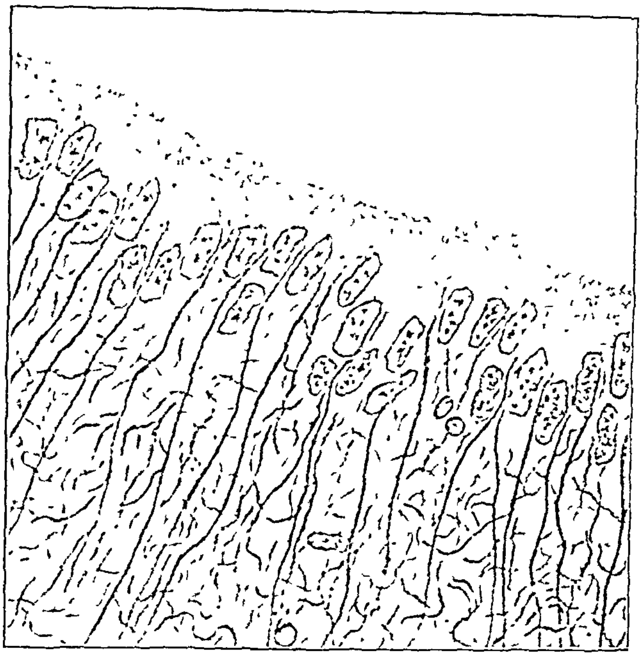

Fig. 7.—Ependymal epithelium lining a large space. Neuroglia tissue, with many rather coarse fibers perpendicular to ependymal layer and extending a short distance between the ependymal cells. *From a preparation not stained by a method suitable for the demonstration of ependymal dots.*

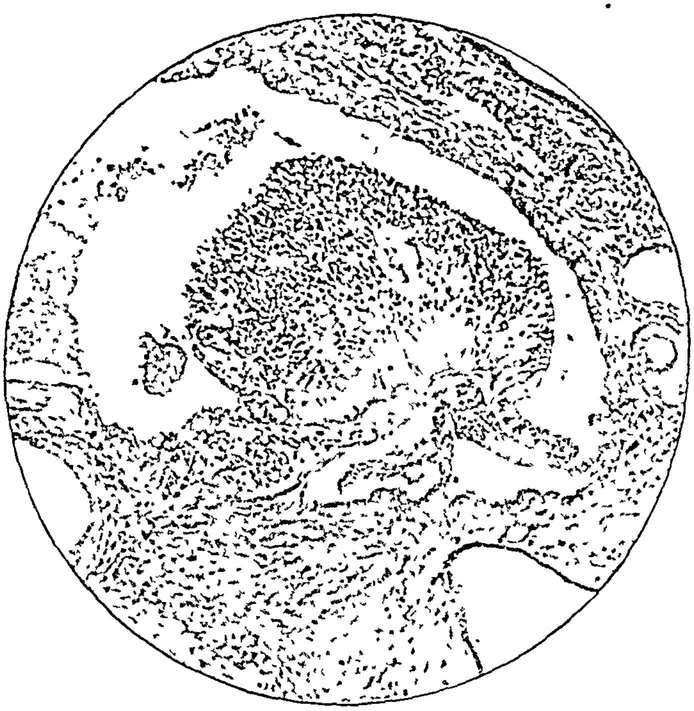

Fig 8.—A simple rosette

ated cells rows of these dots are situated at the base of the cilia. In others they are not present.

In tumor 1 are peculiar structures which deserve attention from their vague resemblance to retina and from their containing fibers which stain like neuroglia fibers. These partially fill some of the cysts. In their simpler form they consist of a rounded mass with a pedicle but little smaller than the mass (Fig. 8). The outer portion of this mass is made up of closely packed round or oval nuclei, sometimes deeply staining, sometimes vesicular with one to three rounded chromatin masses. The cytoplasmic bands of these cells are ill-defined, and between some of them fibers staining like neuroglia fibers can be traced. As the central and basal portions are approached there are fewer nuclei and more fibers. At the base there are almost no nuclei and many coarse fibers (Fig. 4). Most of these coarse fibers are parallel in direction and end against connective tissue by a fairly definite expanded foot. The connective tissue in this portion is frequently in the form of a hyaline band (Fig. 4), sometimes gently undulating, sometimes quite convoluted. Instead of this band there sometimes is a mass of indefinitely fibrillar or ill-defined hyaline connective tissue. In the region of the base there is always a layer of high cylindrical epithelium which passes by gradual transition into the epithelium lining the cyst. The ingrowth and fusion of several such masses produce more complicated structures (Fig. 9). The cysts in which they occur are almost always partially or completely lined by epithelial cells, which are filled with fairly coarse granules of brown pigment. This pigment resembles that found in the retina. The structures themselves resemble in many places the rosettes of gliomata retinæ, and, for need of a better word, may be called rosettes. They have similar small, round nuclei. The coarse neuroglia fibers ending in apposition to a connective tissue band suggest the fibers of Müller. Their occurrence in cysts lined with pigmented epithelium adds further to the analogy.

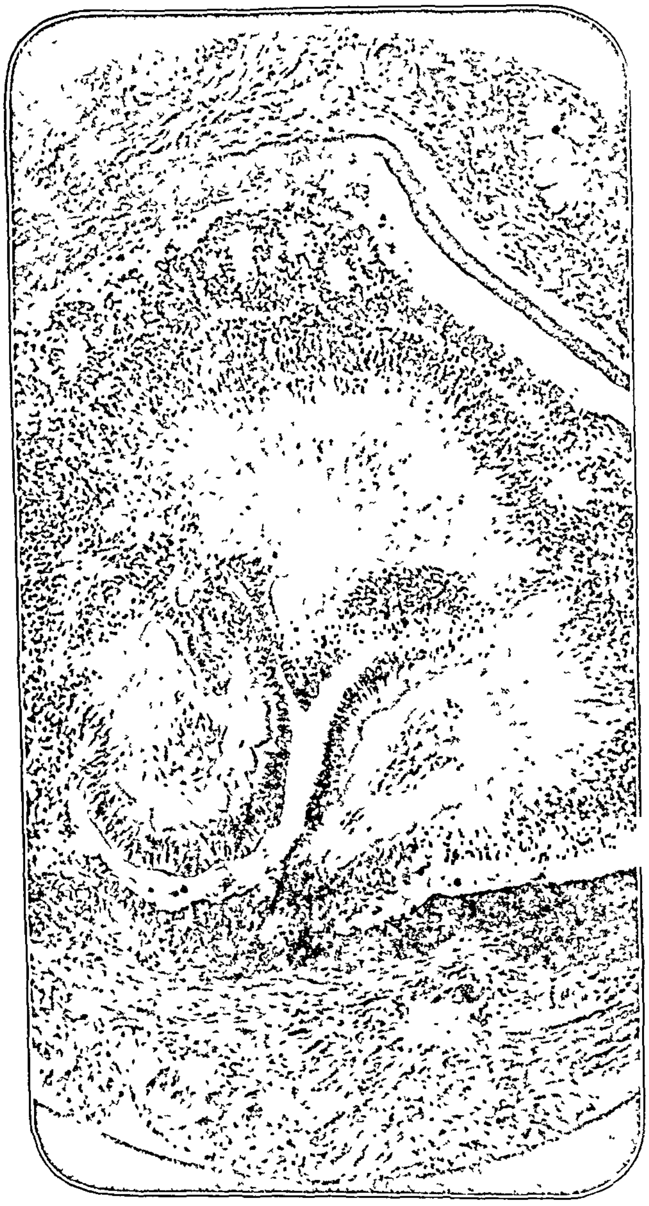

Fig 9—A more complicated rosette

The mode of development of the structures described above can apparently be traced. At first there is a proliferation of the epithelium at one point in a cyst, resulting in a thickened layer of cylindrical cells, between which fibers staining like neuroglia appear (Fig. 10). The fibers and cells increase in number, and at the same time the connective tissue proliferates and pushes the mass into the cyst cavity (Figs. 11 and 12). The fibers grow mainly toward the base, while the cellular portion remains toward the center. In some cysts several such ingrowths are found (Fig. 13), and it is probable that in this way the more complicated masses are formed. Many variations in complexity are seen, and forms representing different stages of development appear in the various sections.

Discussion.—Nowhere in the central nervous system do we have such an intimate intermingling of neuroglia and connective tissue as in these teratoid tumors. In the brain and cord the separation between pia and cortex is usually sharp. Gliomata, as a rule, are in juxtaposition to surrounding white or gray matter or to pia, and so do not lie in very intimate contact with mesoblastic tissues. The nearest approach to these conditions is where vascular radicles, accompanied by a small amount of connective tissue, penetrate nerve tissue from the pia, and where the connective tissue of the choroid plexus abuts on neuroglia. In case of the teratoid tumors this mingling of the two tissues often occurs at points where no vascular radicles penetrate, but seems due rather to a coincident growth of adjacent foci of two tissues of different germ layer origin, with an overlapping, due to irregularity in rate of development. Such an explanation seems more plausible than that we have the one tissue invading preformed tissue of the other kind in the way a malignant tumor invades adjacent structures.

Moreover, there are present fibers in connective tissue remote from definite neuroglia masses. These stain in a manner identical with the neuroglia fibers of the larger masses, and in size, absence of branching, and undulating course present no differences from many fibers seen in them and in gliosis and gliomata. Their isolated presence in connective tissue seems difficult of explanation. At first it was assumed from their staining properties that they were to be considered of undoubted neuroglia origin. It was thought that their presence in connective tissue might be explained by their arising as an offshoot from a neuroglia mass, with which they were originally connected, and from which later in the growth of the connective tissue they had become separated. Another possible explanation is that early in the development of the tumor a small group of neuroglia cells became separated in the midst of connective tissue elements, formed their specific intercellular substance and then disappeared. Either theory would explain their present position, assuming that they are true neuroglia fibers, that is, fibers formed by neuroglia cells. Of this we have no proof, except the morphology of the cell, the relation of the fiber to the cell and the staining reaction of the fiber. The former, in many cases, is by no means definite, and in this connection no cell resembling neuroglia cells are present. Doubt as to the latter arose from the following: In some of the teratoid tumors, in which no neuroglia occurs, there are present about sweat ducts fibers staining in the same way as neuroglia fibers, with both the phosphotungstic acid hematoxylin and modified fibrin methods (Fig. 14). While these studies were in progress, Dr. Mallory, investigating connective tissue and smooth muscle, found fine fibers which stain red by the acid fuchsin potassium permanganate method, in sharp contrast to very abundant unstained fibers. This method also stains sharply true neuroglia fibers, and suggests a possible further resemblance in staining reaction between neuroglia and certain connective tissue fibrils.

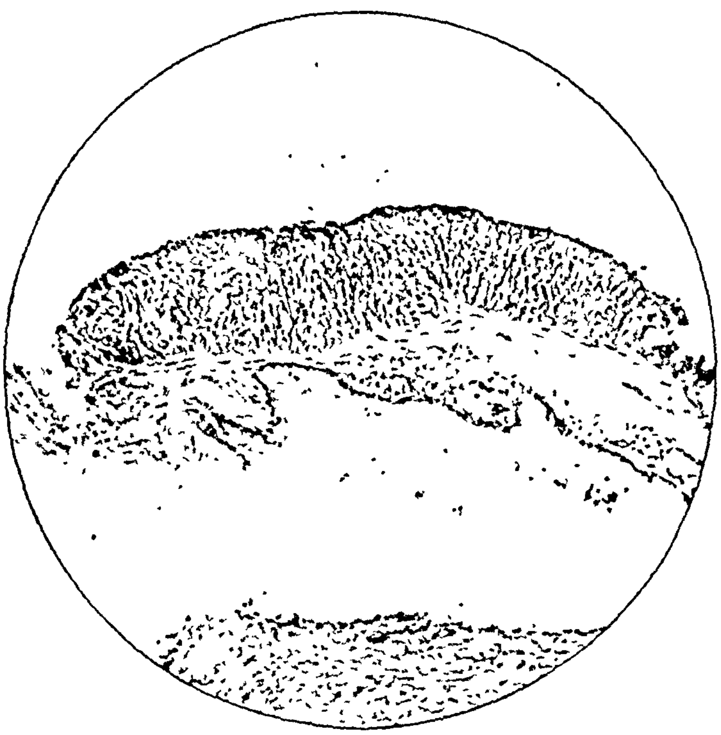

Fig. 10—Early stage in formation of so-called rosette—a local thickening of epithelium of a cyst with formation of fibers between cells.

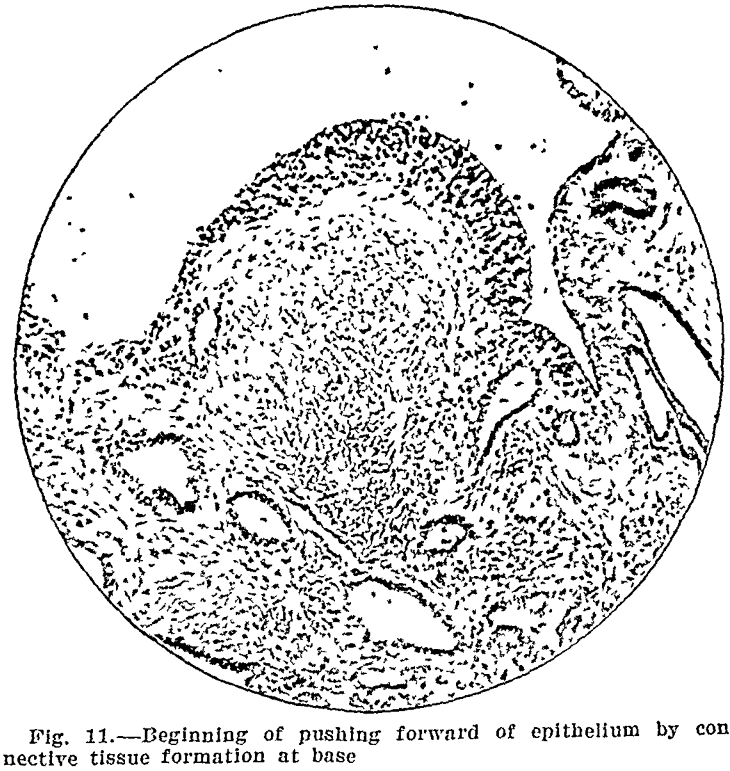

Fig. 11.—Beginning of pushing forward of epithelium by connective tissue formation at base

To test this analogy three specimens of carcinoma of the breast, in whose stroma Dr. Mallory had found the red staining fibrils very abundant, were fixed in either formaldehyd or alcohol. To these were applied the phosphotungstic acid hematoxylin, modified fibrin, Benda's and Huber's methods of staining neuroglia. With all of these fibrils were found, which, from their holding the stain and, to a certain degree, their relation to cells, might be confused with neuroglia. From this it is evident that there are connective tissue fibers which do not readily decolorize after these staining methods and whose identification can not be based solely on staining reaction, since they at times stain in a manner similar to neuroglia fibers.

From this evidence it appears that the fibers scattered in the connective tissue of the teratoid tumor staining in the same way as neuroglia are not of necessity of neuroglia origin. Their true nature at present is indeterminate. In some places they are probably neuroglia, in others not.

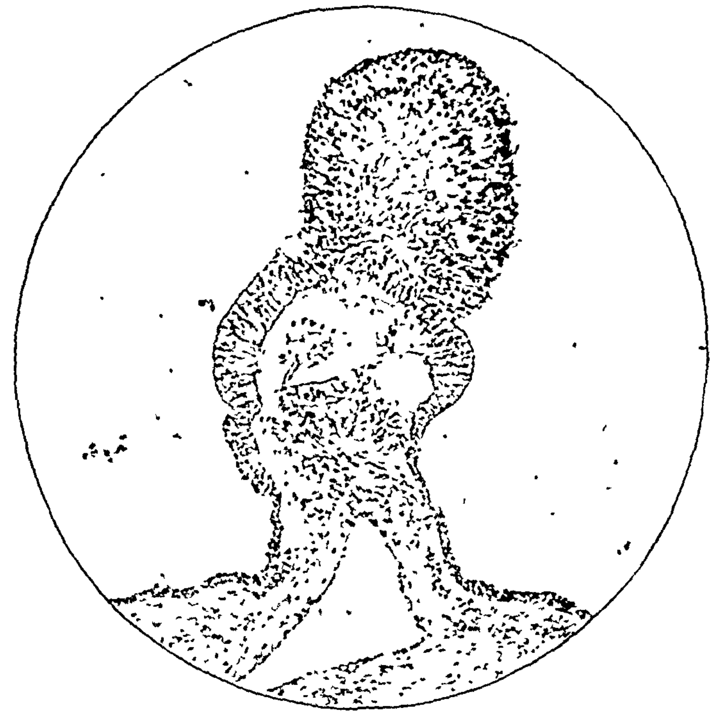

Fig. 12—More definite pedicle of connective tissue capped by mass composed of cells and fibers.

Dots, staining in the same way as the neuroglia fibers, have been described as occurring in many of the cells of these tumors. The question as to their significance naturally arises. Similar dots or short rods have previously been described by Weigert in the normal ependyma,[8] by Storch in cells lining small spaces of a glioma,[9] by Benda,[10] by Mallory,[11] and by Lewy,[12] in the neuroglia cells of gliomata and by myself[3] in a teratoma (tumor 1 of this report), both in the cells lining cysts and those scattered among neuroglia fibers. Various meanings have been attached to them. Weigert in his first paper regarded them as an interrupted cuticular layer. Mallory considered the dots as possible evidence of the ependymal origin of the gliomata studied by him. I, concurring in this view, attached a similar import to their presence in a teratoma. Lewy looked on them as centrosomes, but regarded the presence of groups of them in neuroglia cells as an inheritance from ancestral ependymal cells, and the ring or rosette arrangement of some as a probable rudimentary cilia formation. In considering the different views, certain facts have been brought out which do not readily harmonize with them, though at the same time it has not been possible to determine definitely the nature and significance of these dots, and the attempt to advance any new hypothesis regarding them will not be made.

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[8] Weigert: Bemerkungen über das Neurogliagerüst des menschlichen Centralnervensystems, Anat. Anzeiger, 1890, v, 543.

[9] Storch: Ueber die path. anatomischen Vorgänge am Stützgerüst des Centralnervensystems, Virchow's Arch. f. Path. Anat., etc., 1899, clvii, 127 and 197.

[10] Benda: Path.-anatomische Bemerkungen zu dem zweiten vorstehenden Fall A. Fraenkel's, Deutsch. Med. Woch., 1898, 476.

[11] Mallory: Three Gliomata of Ependymal Origin: Two in the Fourth Ventricle, One Subcutaneous Over the Coccyx, Jour. of Med. Research, 1902, viii, 1.

[12] Lewy: Ueber Centralkörperchen in Gliomen, Virchow's Arch. f. Path. Anat., etc., 1903, clxxi, 236.

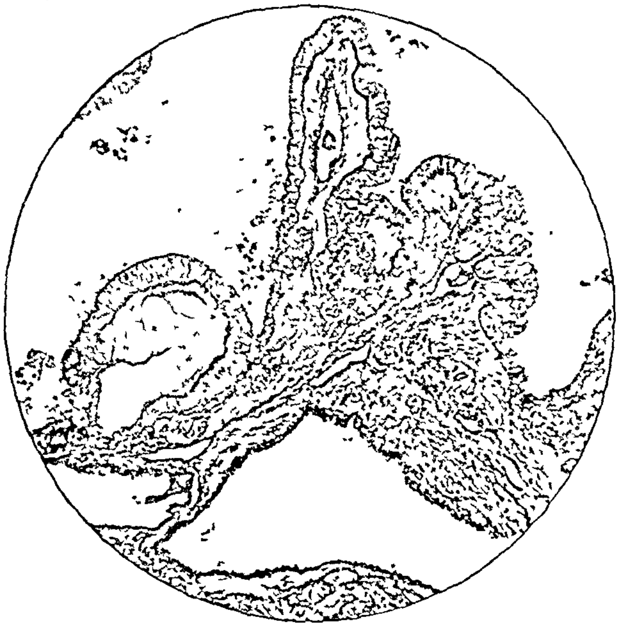

Fig 13.—Several ingrowths into a cyst

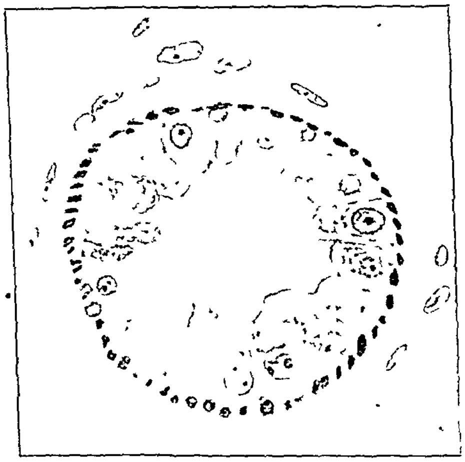

Fig 14.—Sweat duct in teratoid tumor, showing cross section of coarse longitudinal fibers lying between true basement membrane and epithelial cells These stain with neuroglia stains

The earlier view of Weigert that they are a cuticular arrangement no longer seems tenable since the dots are found irregularly scattered through the cytoplasm of cells lying in the midst of large areas of neuroglia fibers and lining no space or lumen.

Are they centrosomes? They can be stained by methods used for demonstrating centrosomes as the iron hematoxylin method. Multiplicity of centrosomes has been described by Heidenhain in bone marrow giant cells. We have studied these dots in the ependyma of a series of pig fetuses from 18 mm. to 17½ cm. in length, and in several early human fetuses, using the phosphotungstic acid hematoxylin staining method. Here they are almost always present as a row or group adjacent to the spinal canal or ventricle. At this time nuclei are situated generally at some distance from the central space and its bordering dots, and dots are not found except in this arrangement. Mitoses of the cells in this region are common, and the dividing nuclei often approach near the space at whose border the dots are grouped. Yet there is no apparent change in the dots, nor are any dots seen associated with the mitoses. This does not seem to favor the view that the dots are centrosomes.

That they bear no close relation to the formation of neuroglia fibers, whose staining reactions they have, is shown by their presence in the fetuses studied at a time much before the fibers show any evidence of their presence.

The dots are already present in an 18 mm. pig, when, according to Hardesty,[13] differentially staining neuroglia fibers appear first in pigs from 16 cm. to 21 cm. in length.

The dots do not appear to be closely associated with cilia, since they were absent in some ciliated cells, and occurred in some non-ciliated cells. They are not always present in cells which originate from ciliated cells, as they could not be demonstrated in an adenocarcinoma of the uterus.

Can the presence of these dots be considered evidence of the ependymal character and ancestry of a cell? Dots were not found in most parts of these tumors except in neuroglia cells or cells lining cysts, and presumably of ependymal character. They were not found in several carcinomata of the breast or in a malignant adenoma of the large intestine. Dots very similar were found in the high cylindrical epithelium of that part of one tumor described as resembling a papillary adenocystoma of the ovary. Dots similar, but slightly larger, were found in some sweat ducts in these teratoid tumors and in those of a specimen of normal skin. Larger granules staining similarly with Mallory's phosphotungstic acid hematoxylin were found in the pancreas, but dots were not present in the kidney of this case, nor were they found in the fetal organs of the 18 mm. pig. This shows that dots, if not identical with those occurring in true ependyma, yet staining similarly, occur in cells undoubtedly of different nature, and so the mere presence of such dots in a cell or group of cells can not be considered diagnostic of the ependymal character and origin of these cells. When they do occur in cells which offer other evidence of a central nervous system origin, it seems justifiable to regard their presence as adding evidence in favor of the view that the cells containing them bear a genetic relation to ependyma. This is true for cells which line cysts and are in close relation to neuroglia tissue and for cells which are embedded in neuroglia fibers. Where the cells line cysts and bear no close relation to neuroglia, such a conclusion does not seem justified, and their nature remains undetermined.

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[13] Hardesty: The Neuroglia of the Spinal Cord of the Elephant with Some Preliminary Observations on the Development of Neuroglia Fibers, Am. Jour. of Anat., 1902, ii, 81.

CONCLUSIONS.

From the preceding work the following conclusions may apparently be drawn:

1. Neuroglia is a common constituent of teratoid tumors.
2. Its structure in them is very varied, simulating many known forms.
3. Neuroglia is more intimately associated with mesoblastic tissues in teratoid tumors than elsewhere.
4. In such tumors occur isolated fibers and groups of fibers which stain like neuroglia, but whose nature can not be determined by the staining reactions of Mallory. Huber and Benda, since these methods may stain other fibers than neuroglia fibers.
5. In many cells of these tumors occur small dots or groups of dots which have similar staining reactions to neuroglia fibers.
6. The presence of these dots in cells, though not absolutely diagnostic, may be considered as evidence in favor of the ependymal origin of the cells in which they occur.

Finally, it is with great pleasure that I acknowledge the very many valuable suggestions made by Dr. F. B. Mallory and his interest in this study. To Dr. J. A. Sampson of the gynecologic department of the Johns Hopkins University I am indebted for a number of these tumors, and to Dr. W. H. Lewis of the anatomic department of the same institution for the series of fetal pigs.

DISCUSSION.

DR. L. HEKTOEN. Chicago—Are the rosette bodies which you have described to be regarded as imperfectly developed eyes?

DR. H. A. CHRISTIAN, Boston—The analogy of these structures to eyes was considered and there is a great deal in favor of this view. The occurrence in many of these cysts of pigmented *epithelium. the fibers which suggest Müller's fibers*, and the small round nuclei which are very common in imperfectly formed retinæ, are all in favor of that theory; but there is no proof of what they are, and this is a mere opinion. However, I regard them as possibly an attempt to form eyes.

HEMOGLOBINURIC FEVER.

ITS CAUSES AND TREATMENT, WITH ESPECIAL REFERENCE TO THE USE OF QUINIA.*

WALTER SHROPSHIRE, M.D.
YOAKUM, TEXAS.

In presenting this subject for your consideration, we do so because of the diversity of opinion concerning it, hence evident need for more thorough study and discussion. Our consideration must leave out many of the features and characteristics of that arch mimic of all diseases, malaria, and be confined to that disease characterized by hemoglobin in the urine and due to malaria in some of her protean manifestations, discarding for the time Yersin's supposed discovery of a specific cause other than the malarial plasmodium, and all other theories and suppositions born of efforts to account for this peculiar manifestation.

In making an effort to clear up some of the uncertainty enveloping the subject, and to arrive at the truth concerning this disease, it was determined to depend, not alone on the individual conclusions of those who saw the disease, influenced no doubt by former teachings and impressions, but to get as thorough report of cases as possible, and view them, their cause, treatment and results, singly and collectively, drawing conclusions from recorded facts, and not by one individual or from one point of view, but by men of many localities, teachings and impressions.

Accordingly 2000 blanks for report of cases were printed, which provided for a thorough report of all features that we are to consider here, together with some others that are desired for future consideration, and with a letter requesting a report of cases were mailed to the physicians of southern and eastern Texas and Louisiana, selecting localities where it was presumed the disease most prevailed. Of those requested, 81 replied; 40 of whom could not report cases, while 41 reported 173 cases, to which I added 29 cases of my own, making a total of 202 cases reported by 42 observers. Many of those reporting had treated many times the number of cases reported, but owing to the lamentable fact that no case book was kept, they were unable to make even a partial report on others.

Of those cases reported many features of the disease were unreported on, owing to the fact that in most instances the patient was in the rural districts. so far from the attendant's office that frequent and proper observations could not be made; and when the patient was seen many of the accoutrements necessary for proper observation were not at hand. Therefore, in tabulating and reporting on the different features observed, it will not be of the whole 202 cases, but of that number on which these features were reported.

Of the 202 cases collected there were 61 cases treated without methylene blue or with less quinia than 15 grs. per diem, which is practically no quinia, of which 26.2 per cent. died and 73.8 per cent. recovered; while 112 were treated with 20 grs. or over of quinia, of which 16.9 per cent. died and 85.1 per cent. recovered; 4 were treated with methylene blue, with 1 death and 3 recoveries.

Of the cases treated without methylene blue or quinia 30 per cent. had hemorrhage from other organs than the kidneys, occurring on the second, third and fourth days, evidencing a non-subdued condition of the malaria and its recurrence, involving other organs; of these 50 per cent. died, two during the chill following the hemoglobinuric attack, and one during the second chill thereafter.

Of those treated with quinia. 9.8 per cent. were so affected, with 3.6 per cent. fatality. It thus appears that quinia effects not only a lower death rate, but also lessens the percentage of recurrent paroxysms. In those cases treated with quinia your attention is invited to the following facts which bear on the adequacy of the dosage: Of 50 cases treated with 20 to 30 grs. per os, 22 per cent. died; while of those given 30 grs. or over in the stomach, 16 per cent of the 43 died; and of those given 40 grs. or over only 8.6 per cent. of the 35 died. Of the 19 cases treated with quinia hypodermically, only one case or 5.26 per cent. died, and that one within 48 hours of the onset, of toxemia, due to the paroxysm had before treatment was begun. There were 12 cases reported where the urine became darker upon the administration of quinia and three where it became darker when quinia was withdrawn. Of the total of the non-quininized patients, 9.8 per cent. died of uremia, while of the 19 deaths among quinia patients, 8.9 per cent succumbed to uremia. While uremia occurred in 16 per cent. of those treated with less than 30 grs. by the stomach, it occurred in only 2.8 per cent. of those treated with 40 grs. or over by the stomach, and not at all in those treated with quinia hypodermically. The average illness of those treated without quinia was 9.66 days and of those

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank A. Jones and W. S. Thayer.

ted with quinia, 5 days. Of the men reporting on
point, 29.41 per cent. believe quinia may and does
uce hemoglobinuria, while 70.59 per cent. believe
t does not. The largest dose of quinia that seemed
duce hemoglobinuria was 40 grs., while the largest
did not produce it was 100 grs. The average
dose that seemed to produce hemoglobinuria was
while the average largest dose that did not pro-
was 52.6 grs. The smallest dose that seemed to
hemoglobinuria was 4 grs. and the average 6.4
e about 15 per cent. of cases occurred when no
d been given for 24 hours or over. The total
se that eeemed to produce hemoglobinuria was
r day.
case here estimated, the subject had been
violently malarious locality three months or
most of them for years. In all save one
story of malarial paroxysms immediately
pernicious or black water form, and in all
larial development. The number of men
d examinations was 4. Number of cases,
ound in 5 cases, not found in 7.

The following conclusions are justified:

1. This disease always occurs in persons suffering repeated attacks of malaria (this was so in every case reported).
2. It nearly always follows one or more mild paroxysms of malaria at the proper time for its next exacerbation (there was but one exception to this reported).
3. It has all the characteristics of malaria, chill, fever and sweat.
4. Where adequate examination of blood is made, the hematozoa of malaria are found (it was so in 41 per cent.).
5. Its habitat, that of most violently malarious districts (all cases reported were so) are sufficient to establish malaria as a causative agent, if not the only one.

To the present there is no claim for a cause other than malaria worth more than a passing notice, except the one which is maintained by about 30 per cent. of those reporting, namely, that quinia produces it, to which claim we invite your careful and scrutinizing attention.

To establish the cause of any disease we must apply the agent to the subject and have, as uniform result, the disease. But if there are two agents suspected as causative which applied together produce the disease, but applied separately to the same individual the one produces it, the other never, we can attribute only to the one a causative place and to the other an accidental presence.

Such is the case before us. Malaria, taken as a cause and applied without quinia to an individual of such tendency, hemoglobinuria results in 15 per cent. of the cases before us. Quinia had been applied to probably all of the cases before us without the presence of malaria and no hemoglobin appeared in the urine. Then in 85 per cent. of them malaria and quinia were both applied to the individuals, hemoglobinuria resulting. Which produces it?

Physiologically quinia acts on the blood, nerves and small vessels. On the blood it inhibits the oxygen-carrying power without causing separation of the hemoglobin from the corpuscle. On the nerves it is, first, a stimulant, then as the dose increases a depressant till it suspends the function of some of them entirely, as the optic and auditory, and in lethal doses, those governing the heart.

On the blood vessels it acts as a vasoconstrictor, increasing blood pressure and toning up those areas where from malarial toxemia there is a stasis, as in the brain in some forms, and the gastro-intestinal tract in others, and in the case before us, in the kidneys. And, like all such remedies, when increased sufficiently it ceases to act as a stimulant to the vasoconstrictor muscles and acts as a paralyzant of them, hence a dilator of the vessels, this occurring just as the lethal dose is reached, which, added to the suspending of the function of the vagus, causes such lowered blood pressure that death soon ensues.

Reviewing these effects of quinia it is indeed difficult, if not impossible, to conclude logically that it can produce hemoglobinuria. To consider it from an experimental standpoint, we observe that the deaths produced by quinia have been due to its effects on the nervous and circulatory systems, with never an occurrence of hemoglobinuria. If quinia is capable of producing this condition at all, it looks strange that lethal doses have never produced it, while those who believe it capable of doing so attribute the production to an average daily dose of 9.7 grs. Thirty of the cases before us had the disease without the exhibition of quinia and of those who were taking quinia when the hemoglobinuria developed, in 89 of the 108 under increased dosage it disappeared. Indeed, it appears to me that one must be a fit subject for homeopathy to conclude that quinia, having produced the disease in 108 cases, would cure it in increased dosage in 89 of them. Again, in those where quinin might be supposed to produce the disease it were untenable logic to maintain that removing the cause would result in an increased death rate, while increasing the cause would diminish it, as 26.2 per cent. is to 16.9 per cent.

Of those reporting, the maximum dose of quinia given without producing hemoglobinuria, the largest dose was 100 grs., and the average 52.6 grs., and of those reporting the largest and the smallest dose that seemed to cause hemoglobinuria, the largest dose was 40 grs. and the smallest 4 grs., or an average of 9.7 grs. per day. Now, in the face of reason, can we maintain that 9.7 grs. of quinia will produce the condition when 52.6 grs. fail to produce it?

Those cases where quinia has seemed to produce hemoglobinuria have invariably been in persons known to be malarially infected, where the disease seemed mild and quinia was administered to eradicate it. Carefully considering these cases, we will note that of 1000 cases so treated probably in 950 cases the disease disappears, one develops the hemoglobinuric form, one the comatose form, three the enteric form, while 45 will return still in the mild form. There is unquestionably as great a percentage that develops the comatose form, due to peculiar determination of the disease to the brain, and three times as great a per cent. that develops the enteric form, due to the determination of the disease to the intestinal tract, as there is of the hemoglobinuric form. Now, if the quinia produced the hemoglobinuric type, did it not also produce the comatose and enteric forms? And how about the 45 returns of the mild form? Did quinia produce them also? Is it not as rational to attribute the one to quinia as the other? Or is it not a fact that in all of the cases which recurred, the remedy had failed to effect the cure and the disease continued, in some assuming a more pernicious form, in others continuing the mild type? It appears that such is the case and that its assuming certain forms as it grows severer or its selections of certain organs on which to exercise its severest toxic effect, is one of individuality or peculiarity of the subject and not of the remedy. If quinia is to be eschewed in treating the one nuric, should it not be shunned in the others, comatose and enteric? Yet I dare say that no man in this assembly would have the temerity to withhold quinia, the only specific, in the comatose or other pernicious forms of malaria.

Another strong evidence that it is the individual peculiarity that determines the hemoglobinuric form, is the fact that this form recurs again and again in the same individual and is prone to run in families, while seldom indeed an individual who has suffered an attack of hemoglobinuria develops a pernicious malarial attack other than the hemoglobinuric form. Why is it thus, if not due to the individual peculiarity?

Another error in the conclusion that quinia produces hemoglobinuria is the fact that in the vast majority of those cases quinia is withheld *during the greatest* pyrexia of the preceding attack, or to wait the action of calomel, and is administered too late to prevent the pending paroxysm; this growing more severe assumes the hemoglobinuric form, or, if it has already become hemoglobinuric, the urine that has partially cleared *during* the interval becomes darker, which is attributed to quinia. In this connection permit me to say that in every case seen where quinia had been administered and might be supposed to play a part in producing hemoglobinuria, the paroxysm occurred at the regular time for the exacerbation of fever and with chill and rise of temperature, just as occurs when the disease is left to malaria alone; and in those cases reported by others, even where black water occurred as often as three times, the increased color of the urine marked well the time for recurrence of malarial paroxysm in approximately 20 per cent. occurring on alternate days, 75 per cent. on successive days and 5 per cent. twice daily, just as we find malaria acting in other forms than this.

Bearing in mind the established fact that the malarial parasite is most easily killed by quinia in its younger existence, it is easy to understand that withholding the drug through the stage of high fever or till the effect of calomel is had, will permit the growth of the plasmodium to such a size as to be decidedly more resistant to quinia, and to allow it to go on to sporulation, thus producing another paroxysm which may be pernicious, even hemoglobinuric, and still there be enough quinia in the blood to kill the young parasite as it is set free in the plasma, thus explaining some of the spontaneous cures without further administration of the drug.

Another error in quinin therapy of this disease, to which your especial attention is invited, is inadequate dosing. The estivoautumnal parasite, the one most commonly producing this disease, is far more resistant to quinia than other forms, and it, like all forms of animal life, becomes habituated to any poison till it can withstand even ten times the dose necessary to kill when not so habituated. In all violently malarious districts, such as this disease prevails in, and especially in every chronic malarial subject, there is, without exception, in this country, a partial saturation of quinia for a considerable time, if not by quinia prescribed as such, then by quinia in the form of the numerous patent chill tonics, which have for their base quinia; hence the malarial plasmodium in this disease has, to some extent, become a quinin habitué, and only vastly increased doses prove toxic. Personally this has been observed many times; in one instance. 25 grs., given hypodermically to a year old child suffering from the enteric form, although administered 8 to 20 hours prior to the pending paroxysm, failed to prevent it and the little fellow died during the chill. You will observe that only 8.6 per cent. died where the dose was 40 grs. and over, while 22 per cent. died with 30 grs. or less.

Your attention is called to another point of error in quinin therapy in other forms of malaria as well as this, and it is by far the most important point of all—that of failing to get the drug into the blood. It is adequately proven and generally conceded that the malarial parasite destroys its host, the red blood cell, on sporulation, thereby setting free into the plasma what hemoglobin it has not consumed, there to remain until the liver has converted it into bilirubin. This, frequently repeated and in excessive quantities in the pernicious types, overwhelms the liver with work till its function is almost, if not quite, suspended, and a stagnant portal circulation results, hence the *vis-a-fronte* causes a passive congestion of the stomach mucous membrane and a cessation of its functions, both secretory as to hydrochloric acid and absorptive. The first of these conditions evidenced by alkaline vomitus, would prevent the solution and absorption of quinia put in the stomach in other than an acid solution, were we able to keep it there, while the abolition of the absorptive function would prevent the taking of quinia into the blood were we able to maintain an acid solution on the stomach; or more accurately speaking, the blocked portal circulation would prevent its entrance to the general circulation and its application to the parasite. So quinin dosage by the stomach is in many instances but a method of deceiving ourselves in the belief that we have applied this specific in a case where it is needed, while in fact the drug has never reached the blood where the parasite lives.

Just here your attention is called to the fact that all the cases where quinia was thought to be the cause of hemoglobinuria have been cases where it was given by the stomach and by men who depend on the stomach administration, while not a case receiving hypodermic administration developed the disease and none of the men who depend on the hypodermic method attribute the disease to quinia; the death rate under the hypodermic method being 5.2 per cent., while that under stomach administration is 20 per cent. This, taken in connection with doubtful ability to saturate the blood through the stomach in pernicious forms, seems quite significant.

It is claimed that hemoglobinuria is the manifestation of an idiosyncrasy for quinia. Yet no case of unquestioned freedom from malaria has been observed to develop hemoglobinuria from quinin administration, and in every case observed and reported the patient had taken quinia for other troubles and mild forms of malaria without the development of hemoglobinuria. If quinia produces it in severely malarial subjects, why not in mild and non-malarial ones?

Those cases attributed to quinia are not experimentally produced or based on physiologic or pathologic facts, but on purely paracelsian empiricism. Are we justified in adopting this method of reckoning against such preponderating evidence to the contrary in this age of enlightened and logical therapy?

The commonly accepted symptoms of cinchonism may and do cause us to err in our efforts to cinchonize our patients by the stomach, for of tinnitus aurium, nausea, relaxed and moist skin, dilated pupils, generally accepted as indicating quinia in the blood, the two former are most depended on and least reliable. In fact, I do not believe them due to quinia in the blood at all, but to the application of quinia to the end organs of the nerves in the stomach mucous membrane. They are like the urticaria due to gastric irritation, a manifestation of the irritation of those nerves by quinia. Not infrequently violent complaint of those symptoms has been made during the stomach administration of quinia and by changing to the hypodermic method, even with an increased dose, the complaint has ceased. You will pardon a brief report of a case in this connection which illustrates the fact. Mrs. C., a malarial cachectic of repeated recurrent attacks during the last 12 months, was suffering quotidian malarial paroxysm. Quinia sul. was prescribed morning and night in gram doses after Koch's method. The paroxysm occurred next day at the usual hour. Quinia was increased to three grams daily; the next morning the paroxysm was on time and hemoglobinuric. She was complaining vehemently of cinchonism and insisted that no more quinin be given, as it was doing no good, and making her sick. Now, one who in the least feared quinia as a cause of hemoglobinuria would have discontinued it when the disease assumed the hemoglobinuric form under 45 gr. doses, but the method of administration was changed to hypodermic and 20 grs. given every 4 hours, or 100 grs. per day, and the symptoms of cinchonism largely disappeared, the urine cleared, and the patient made rapid recovery.

In this case, as in several others equally as emphatic, the symptoms of cinchonism complained of disappeared under the increased dosage when the drug was removed from the mucous membrane of the stomach, and what some would have considered hemoglobinuria produced by quinia, disappeared under vastly increased doses when it was put directly into the blood. The only rational conclusions to be drawn from such cases are, first, the quinin applied to the gastric mucosa produced the symptoms called cinchonism and that its removal permitted the symptoms to subside; second, that the quinia had never been absorbed and carried into the blood, and therefore had not killed the parasite, whose ravages continued till quinia was so applied and terminated their career.

Summing up the evidence for and against quinia as a cause for this disease, we have:

Of the physicians reporting, 29.4 per cent. affirm it.	Of the physicians reporting, 70.59 per cent. deny it.
When quinia is suspended in treatment, 73.8 per cent. recovered.	When quinia is administered 83.1 per cent. recovered.
Distinct recurrences of attacks after the first appearance of black water in non-quininized patients, 9.8 per cent.	Distinct recurrences of attacks after the first appearance of black water in quininized patients, 4.4 per cent.
Per cent. of cases occurring from quinin alone, no per cent.	Per cent. of cases occurring from malaria without quinin, 15 per cent.
Per cent. of cases where quinin was thought to aggravate, 5.9 per cent.	Per cent. of cases where quinin was thought not to aggravate, 55.4 per cent.

With such preponderating evidence against quinia as a causative agent, that portion of the subject is left with you.

TREATMENT.

In taking up the treatment of this disease I shall be as brief as possible, giving the greater time, first, to those methods on which we differ; second, to those thought most important; third, those not in common use—dwelling but little on those measures of common acceptance and usage among us.

The inter-relation of cause and treatment, or the dependency of the one on the other, has caused in considering the first the foreshadowing of the most important feature of this portion of our subject. If the disease is due in part or whole to malaria, the treatment should be to remove the cause by administering quinia, the specific, in a manner sure to reach the parasite in the blood, and in sufficient dose to kill with certainty.

In dangerous diseases like this we should never reverse the order of the old Latin maxim, *"curare, cito et jucunde." "Curare"* should stand first; and in selecting methods of administration the one surest to carry the remedy to the parts desired should without exception be our choice, so long as imminent danger to life is not incurred—hence, intravenous or hypodermic administration should be resorted to in medicating a patient suffering from this trouble.

In dosage of quinia one should steer well on the side of the drug, remembering that the parasite is of that type most resistant to quinia, and as a rule has become to some extent habituated to the drug. Bearing these facts in mind and taking for our base the dose that ordinarily proves efficient in other forms of malaria, an average of 30 grs. daily, we would take for an average dose in this condition, 40 grs. intravenously or hypodermically per day, until the next period for an exacerbation is safely passed, and continue it in half that dose until the second expected exacerbation is safely passed, when it should be discontinued for three or four days, and repeated in 20 to 30 grain doses every four to six days till five or six weeks are passed without a paroxysm. In the primary administration of the remedy one should remember that the older the parasite the greater its resistant power to quinia; therefore the sooner it is administered after the parasite has sporulated (the onset of the paroxysm) the easier it is killed and the surer is one to prevent the next paroxysm, which in pernicious malaria frequently means death to the patient.

Since Ivanoff,[1] by a careful study of the effects of quinia and methylene blue on the malarial parasite, has proven that quinia has its greatest affinity or toxic effect for the chromatin or nucleus of the plasmodium, which constitutes nearly the whole of it soon after hatching, and loses it as the achromatic zone accumulates around the nucleus as the parasite grows older and larger (a fact well proven clinically long since); and that methylene blue has greatest affinity for the achromatic zone (nicely portrayed by Romanovsky's method of staining), it behooves us to remember methylene blue in cases where we are called so late that quinia alone might fail to prevent the pending paroxysm, and to combine then the methylene blue in 3 to 6 grs. doses, two or three times daily. Another characteristic of methylene blue that recommends it in these cases is its sedative effect on the nervous system as portrayed by Hughes and Lovelace,[2] where of 22 cases of acute mania treated with it 16 received natural refreshing sleep. Of four cases of this disease reported treated by methylene blue there were three cases, or 75 per cent. recovered. Of the 19 cases reported treated with quinia hypodermically only one death is reported, and that occurred within 48 hours, showing that it was the result of the paroxysm had prior to any treatment, and not after quinia or any other remedy might have prevented it.

The tardiness of the effect of arsenic as an antiperiodic practically puts it out of consideration in conditions so pernicious, and its tendency to irritation of the renal epithelium also contraindicates it. There is no other drug whose mention in this connection is worthy of our time.

Considering other conditions for treatment, the inactivity of the liver stands first and a cholagogue is certainly indicated, for the presence of free hemoglobin in the plasma would alone, if undisturbed, soon prove fatal, to say nothing of the stagnant portal circulation obstructing nutrition and medication intended to alleviate other conditions. Calomel is certainly one of the best, if not the best, cholagogue and its inoffensiveness to the mucous membrane of the stomach commends it highly in this trouble where nausea is a predominating feature, hence calomel in small doses, often repeated (¼ gr. every half hour) is a favorite and justly so, and I would add 1-20 gr. of hyd. bichlorid hypodermically every five hours till the liver is well aroused, with massage of the liver or mustard plasters over it to the point of thorough redness of the skin. Of the 200 cases reported all save one were treated with calomel as a cholagogue and I note that the greater one's experience with this disease the more urgent is his advocacy of calomel.

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[1] Deutsche Med. Wochenschrift, May 2, 1901.

[2] Phila. Med. Jour., March 22, 1902.

Certainly to unload all effete material from the bowels and stimulate their eliminative function would add to the chances of our patient, and enemas of hot solutions of sulphate of magnesium accomplish this quickest and surely, together with stimulating diaphoresis, a valuable means of eliminating much undesirable material from the blood and relieving the irritated kidneys of some tax. To allay the nausea and vomiting, iced champagne has proven most efficient in my hands, with ice cold beer a close second, the former adding stimulation and the latter both stimulation and diuretic effect to its credit. While large drafts of very hot water have often proven very efficacious as a stomach sedative, as well as a diaphoretic and stimulant, one of my advisers strongly urges this as the most important treatment of all. So soon as the stomach is in a condition to appropriate it, nutritious fluid food should be given at regular and proper intervals. For the kidneys, hot fomentations over the loins or perhaps counter-irritants with mild diuretics should be given, every effort being made to save the kidneys any irritation and labor. The intravenous injection of large quantities of normal salt solution serves well to stimulate over the depression, and assists in eliminating poisons from the blood, and in one case reported, where entire suppression of urine had occurred, it started up the renal secretions and the patient recovered when apparently he was doomed. Stimulants and tonics hypodermically in liberal doses should be used to maintain the vital functions, and here strychnia stands first. So soon as the expected paroxysms are safely passed, ferruginous and bitter tonics per os are to be given, steam baths and sweat baths are recommended and have to commend them the greatest relief of the kidneys by their diaphoretic action.

Daily dose of quinin; how administered	20-30 gr. Stomach				30-40 gr. Stomach				40 gr. and up. Stomach				20-30 gr. Hypod'rmically.				30-40 gr. Hypod'rmically.				40 gr. and up. Hypod'rmically.				15 gr. or less, or no quinin.				15-20 gr. Uncertain.				Methylene blue.			
Manner, cause and time of death	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.
Deaths with hemorrhage from kidneys alone	.	1	7	2	.	.	1	1	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	..	3	1	1	2	.	1	1	3	.	.	1	.
Deaths with hemorrhage from other organs and kidneys.	.	.	1	.	.	1	.	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	1	3	3	2	.	1	3	1	.	.	.	.
Recoveries with hemorrhage from kidneys only	37				4				30				8				4				3				36				9				3			
Recoveries with hemorrhage from other organs and kidneys.	2				. . . . .				2				. . . . .				. . . . .				3				9				. . . . .				. . . . .			
Total number of cases treated	50				8				35				8				5				6				61				19				4			
Number and per cent. of recoveries	39 cases or 78%				4 cases or 50%				32 cases or 91.4%				8 cases or 100%				4 cases or 80%				6 cases or 100%				45 cases or 73.7%				9 cases or 47.4%				3 cases or 75%			
Number and per cent. of deaths	11 cases or 22%				4 cases or 50%				3 cases or 8 6%				. . . . .				1 case or 20%				. . . . .				16 cases or 26.3%				10 cases or 52.6%				1 case or 25%			
Per cent. of deaths in quinin treatment by stomach and hypodermically.	18 cases or 19.3 per cent.												1 case or 5 26 per cent.																. . . . .				. . . . .			
Per cent. of deaths in each treatment	19 cases or 16 9 per cent.																								16 cases or 26.2%				. . . . .				1 case or 25%			
Number and per cent. of cases with hemorrhage from other organs	9.8 per cent.																								29.5				. . . . .				. . .			
Average duration of illness	Treatment with quinin—5 days.												Treat't without quinin—9.66 days.																							
Opinions of reporting physicians	70 6 per cent believe quinin does not produce hemoglobinuria.												29.4 per cent. believe quinin does produce hemoglobinuria.																							

The time and space required to enumerate writers and practitioners who have assisted in these efforts are too great to allow their recital, hence the omission of a bibliography.

DISCUSSION.

Dr. William Krauss, Memphis, Tenn.—One can not study diseases by any rules of logic, but we can discuss that way. The reader of the paper states that, among about 170 cases reported, the blood examination was made in 12, and 7 of these 12 did not show the malarial parasites; if that were so, I should like to know why he cinchonized these 7 patients? About 12 years ago I attempted, by proxy, to study this disease and found in a very short time that it was exceedingly unsatisfactory. Then I attempted to place myself in touch with gentlemen in the vicinity of Memphis, requesting them to wire me when they had such cases and I would take the first train to them. This also proved to be unsatisfactory. I then decided to abide my time until I could get a visiting service in a local hospital where I could study the disease properly from beginning to end. I think it is illogical to attempt to classify the mortality according to the treatment, irrespective of the pathologic conditions; whatever remedy we use should be given to overcome the pathologic conditions or to remove the etiologic factors which may be present in a given case. Judging from the character of the cases reported he evidently saw cases of the intermittent variety, accompanied by chills and fever, and such cases are exceedingly rare during the season of the estivo-autumnal parasites. They are found in the spring and early summer and are very transient. In his cases he found the parasites persisting through the attack. It is proper to cinchonize such cases.

What is the pathologic condition to be found in such cases? It is a steatosis of the kidneys and liver, a rapid breaking down, and, if present, a disappearance of the malarial parasites. The treatment must be directed to that end. What is the pathology of the blood? There is a hemolysis. If you have studied the subject of hemolysis only very superficially you know that it requires a specific immune body and a complement to produce it. The normal mechanism of this in malarial infection is probably for the destruction of infected red blood cells. There is a later storage of a surplus of this specific body; the complement may be produced either by quinin or a new superadded infection—either, then, may be the occasion of an attack. This is where the question of administration or non-administration of quinin comes in. In the majority of the cases the hemolysis effects the destruction of the parasites. The subsequent temperature may be a guide; as a rule, the present malarial infection may be ignored. The doctor has stated that only small doses of quinin produce the hemoglobinuric fever, and in one case he produced it with 90 grains; if that is a small dose I should like to know what he considers a large dose.

Last summer, during my illness, there were admitted to St. Joseph's Hospital 21 cases of malarial hemoglobinuria, and all were treated with hypodermic injections of quinin; two recovered. On the other hand, I have now an unbroken series of 21 cases without a death. The main point is, avoid cinchonizing these patients. Take such measures as you can to prevent fatty changes taking place.

Dr. Frank A. Jones, Memphis, Tenn.—A few days ago I heard Dr. Osler say: "Tuberculosis is the captain of the men of death." I should like to paraphrase that expression, and say: "Tuberculosis is the captain of death and malaria is his first lieutenant."

We have in our midst to-day a quartet of men who have been working in malaria. One of these is Dr. Krauss, and there is no man in this country who understands malaria better than he. Then we have among us another gentleman whom we all know and greatly respect, and who has written a book on malaria; I refer to our chairmain, Dr. W. S. Thayer. Again, we have another gentleman of brawn who has been brought up in a country district, at a little flag station, but yet who has the best equipped laboratory in Mississippi; I refer to our secretary, Dr. James B. McElroy. One is a wheelhorse; the other an Ajax. Then, too, I ask that Dr. Sutherland of Mississippi, another man who has done much on this subject and a man whom all greatly respect, be asked to address this Section.

Dr. H. L. Sutherland, Rosedale, Miss.—This subject has been frequently discussed and the principal feature of discussion always is as to the advisability of the use of quinin. I think there is one proposition on which we all agree, namely, that in the presence of an active estivo-autumnal infection we should use quinin. It seems to be the general opinion that "the existence of the hemoglobinuria itself, or the presence of some other toxic substance in the blood" (Thayer) destroys the parasites and renders the administration of quinin unnecessary and therefore harmful; but, in my observation, this is not always true. The use of the microscope should then govern, in these cases, the use of quinin. But, unfortunately, only a very small percentage of physicians practicing in sections where hemoglobinuria occurs have a practical knowledge of the use of the microscope, and therefore must find some other method of determining the treatment.

After the appearance of hemoglobinuria, my first attention is directed to elimination, and I do not give quinin in the first twenty-four hours; if the fever continues high, I give 15 or 20 grains of quinin or two ounces of Warburg's tincture. If the patient has taken quinin preceding the attack, I am not in a hurry to give more, but rather await the result of what he has taken. I can better illustrate by citing two cases in point: In August, 1901, I saw a case with a temperature of 101, and next day 102, and the third day 104.8, when I gave two ounces of Warburg's tincture, and his temperature dropped to 101. I repeated the dose and his temperature became normal, and on the fifth day of the disease there were a few estivo-autumnal organisms present.

Oct. 25, 1902, my son had a chill and in the next forty-eight hours took 48 grains of quinin. Several hours after the last dose he had a chill with fever, which soon subsided and I gave no more quinin; in thirty hours after the last dose of quinin he had another chill with hemoglobinuria, but his temperature did not go over 102, and in another twenty-four hours his urine had cleared and temperature was normal. I supposed he had had sufficient quinin prior to the hemoglobinuric attack to kill the malarial organisms. A blood examination made by Dr. Krauss of Memphis, October 31, showed "very active estivo-autumnal infection," and I began the administration of quinin again. These two cases prove, to my mind, that in some cases at least quinin should be given, while, perhaps, in a majority of cases, they get along better without it; and I have adopted the rule that where the fever following hemoglobinuria continues high after tewnty-four hours, or from a temperature as low as 101, its tendency is to go higher each succeeding day, I give quinin, and following this rule I find I give it in about half of my cases.

Dr. James B. McElroy, Stovall, Miss.—I agree with the reader of the paper in the statement that hemoglobinuric fever is, in the majority of cases, due to malarial infection. That parasites are not always found in the peripheral circulation is due to several circumstances. Stephens and Christopher think it is due mainly to the fact that quinin has usually been administered previous to the occurrence of black water. This is undoubtedly true, but I have seen at least one case in which parasites were present previous to the attack; no quinin was administered previous to nor during the course of the disease, and the parasites disappeared a few hours after the onset. I have surmised that this is due to the fact that in the extreme hemolysis which takes place the cells of low resistance will naturally be the first to be destroyed, consequently the cells containing parasites are usually first destroyed. The parasites, being set free in the plasma, soon die.

I have observed more than fifty cases of this disease and in 19 cases have made repeated blood examinations. In only 5 of these have parasites been present, estivo-autumnal in 4 and double tertian in 1. The malarial nature of the remaining 14 was demonstrated by the leucocytic variation and pigmentation characteristic of malaria, and by the character of the febrile attack previous to the development of black water.

As to the relation of quinin to hemoglobinuric fever, in a few instances black-water fever develops in the course of a malarial infection in which no quinin has been administered, as in the case just referred to. But in the majority of cases it occurs in the course of an old malarial infection in which quinin has been administered. And my experience is in accord with the findings of the malaria commission to the royal society, which concludes that black-water fever is of malarial origin, but that it is not a malarial attack *per se;* that in the majority of cases quinin is the immediate causative agency. I have never seen a pure quinin hemoglobinuria, though it undoubtedly has occurred.

The few experiments which have been made *in vitro* to determine the hemolytic effect of quinin in these cases have, so far as I know, been negative. Recently I have been making some experiments along this line which, though limited, indicate that quinin has a hemolytic action on the blood of these cases.

As to treatment, occasionally in cases of intermittent hemoglobinuria—and I may say that such cases are comparatively rare in my experience—quinin used cautiously may be of benefit. But as a rule in the cases of continuous hemoglobinuria I do not think that quinin should be administered. In the first place, it is not indicated, as the parasites are not usually present, and when present its administration has aggravated the condition in my experience, as the two following cases will show: In the first case of the series of the 19 cases referred to above, parasites were observed during the course of the disease, on the third day when the urine had begun to clear. Following Bastianelli's rule, I determined to administer quinin. Seven and a half grains were given hypodermatically and four grains ordered per os every four hours. Two hours after the first dose the urine became black, suppression and death following during the night. Whether this was due to the sporulation of a new group of parasites or to the quinin administered, I am unable to say.

In case number ten of the series, parasites were observed during the course of the first day of black water when the urine was clearing. Quinin was administered and a few hours afterward black water returned with an aggravation of all the symptoms. Quinin was immediately discontinued, and the patient recovered.

Dr. W. S. Thayer, Baltimore—There is little of value that I can say which has not already been said by those who have had much more experience with this condition than I. Hemoglobinuric fever does not occur in Baltimore. Those cases that I have seen I have visited at distant points—in Virginia, Tennessee and North Carolina. My knowledge on the subject has been obtained mainly from literature. One should remember that hemoglobinuria is not a symptom proper of malaria; it is a condition for which malaria opens the way; its remarkable limitation to special malarial districts is also well known. But one should further remember that hemoglobinuria occurs as well in a variety of other infectious diseases. It may complicate typhoid fever, yellow fever or smallpox. In malaria it may occur at the height of an acute paroxysm when parasites are present in the circulation. In many cases, however, the malarial attacks disappear on the first outbreak of hemoglobinuria, and parasites can no longer be found in the blood. Again, the condition occurs in patients who have recovered for a greater or less length of time from their acute malaria and are in a condition of postmalarial cachexia. This is often the case. In certain parts of this country the disease is met with more frequently in the late fall, at about the time of the beginning of frosts. I believe that it is fair to state that, in the majority of cases, within twenty-four hours of the onset of the attack of hemoglobinuria, the parasites of malaria, are not to be found in the blood. If the case, however, be left to itself relapses of the malaria will follow sooner or later in many instances.

Quinin is of no more value in the treatment of the hemoglobinuria as such which occurs in connection with malaria than it would be in hemoglobinuria connected with such diseases as yellow fever or typhoid fever or smallpox. Quinin is of value in removing the ultimate cause—the malarial parasite; it is of no value in the treatment of the immediate conditions on which the hemoglobinuria depends. If the parasites do not disappear from the blood it seems to me that we are bound to administer quinin. If, in a given case, one suspects that the patient has pernicious malaria and microscopic examination of the blood is impossible, quinin should certainly be given at the onset of the trouble. If, however, after twenty-four hours no parasites are present in the blood it may be better to postpone quinin treatment until later.

With regard to the deleterious effects of quinin: True quinin hemoglobinuria must be of the greatest rarity in this country. Cases have been reported, especially in Sicily, in which the most minute doses of quinin have produced violent attacks of hemoglobinuria, cases in which there can be no doubt as to the nature of the condition. These instances depend probably on individual susceptibility.

With regard to the method of administration of the drug it is hardly worth while to speak. Quinin acts most promptly when given intravenously, and the dihydrochlorate gives excellent results when thus administered.

Dr. Walter Shropshire, Yoakum, Texas—With regard to the assertion by Dr. Krauss that I studied hemoglobinuria by proxy, I want to say that no one examined these cases but myself. I reported 29 cases in the series, and I had some I did not include because many of them were rather indefinite—I could not give in them a fair and honest consideration of the subject. Among the 29 cases there were but 2 deaths. In one of these a physician asked me to attend a patient for him, but refused to allow me to treat the case in my own way. This patient had a mild paroxysm every morning for three mornings and then hemoglobinuria. I had promised this physician to give the patient calomel and withhold quinin until it acted. I saw this patient at 4 p. m. one day and I realized the mistake in giving him calomel and not quinin till after it acted, for scarce time for the calomel to act remained before the next paroxysm was due, but I had promised to treat the case according to the physician's expressed wishes, and I gave him calomel. Of course it did not prevent the next paroxysm. When I returned home I asked that physician never to send me to another of his cases instructed. The next morning this patient had another paroxysm, entire suppression of urine and a fatal end followed.

The other fatal case was one in which there was a distinct nephritis present. He died on the sixth or eighth day in spite of the use of quinin. Thus out of 29 cases only 2 deaths were recorded, and one due to the non-use of quinia.

The pathology of the disease has been overlooked. Ewing reports exáminations of kidneys after death in one case, and he said he was unable to find or demonstrate the parasite in the peripheral circulation, but at autopsy the kidney capillaries were found to be filled with them. In every case at autopsy in the pernicious form the parasites are found in the spleen and the brain in comatose forms, and stomach and intestines in the choleric or enteric forms.

If the parasites are to be found congregated in such situations in forms when symptoms are referable to it, why not in the kidneys in this form? The fact is they have been where autopsy was had and adequate examination made in reference to the non-appearance of the parasites in the peripheral blood. I should like to refer the secretary to one of his own cases, where it was found on the third day that the peripheral blood contained them after repeated negative examination. It has been noted that in the pernicious form of the fever the parasite seems to leave the peripheral circulation and invades the central circulation and organs, hence we can not depend on examination of the blood from the peripheral circulation as a guide to our therapy in this form of disease.

New Appliance.

AN EASILY DETACHABLE PLASTER-OF-PARIS CAST.

CHARLES O. BECHTOL, A.B., M.D.

CHICAGO.

It is the purpose of this paper to present a method of applying plaster of paris to fractured limbs which we believe to be new. The earlier idea of good treatment for a fracture was absolute immobilization. This was brought about by splints made of numerous materials and by bandages made stiff with various substances, i. e., white of egg, starch, and dextrin. Plaster of paris was first used for this purpose in Spain, but Kluge of Berlin, in 1829, first made a careful study of the application of plaster to fractures. This method of complete, long immobility of a part, accompanied sometimes by a too tight bandage, brought occasional loss of limb, constant stiffness of neighboring joints and atrophy of muscles and numerous unfavorable and unpleasant conditions.

The most radical departure from the old methods is expressed by Lucas Championnière in his "Traitement des Fractures par le Massage et la Mobilization" and by his followers. They believe that complete immobilization only prevents the first pain and friction of the broken ends of bone; that it imperfectly restores form; that subsequent swelling may reproduce deformity and that it does not favor callous formation or bony union. M. Canay proved that the broken bones of a dog if absolutely immobile would not unite and that human ribs, which can not be put entirely at rest, are the quickest to heal of any bones of the body. The treatment of fractures with massage and mobilization is limited to those cases which are not compound, have no large blebs and which have no great mobility or tendency of the deformity to recur. Its field is evidently narrow even if the patient could be under close enough observation to make its application possible.

The ideal treatment comprehends the best of each of these two widely different methods, i. e., absolute immobility during a part of the time to insure perfect position of the ends of the bones and normal lines and the ability to quickly remove an absolutely immobilizing apparatus that the parts may be inspected, massaged, hot water be applied and passive motion performed. A home-made splint requires more time in the making and in the application than a good cast and it is at best an awkward, unsightly thing, which is constantly working out of place. The fracture-box requires the patient to remain in bed and is used now only in cases where the swelling is unusual or large blebs are present. Factory-made splints never fit. There is a class of perfect-fitting, detachable splints, made by impregnating layers of cloth with plaster cream, which approaches perfection. Some of these are applied anteriorly, some posteriorly and still others used as side splints and held in position by a roller bandage. The best of this class is the Bavarian splint, but it, like the others of its class, is objectionable because of the time consumed in the making (at least one hour) and the amount of plaster scattered about.

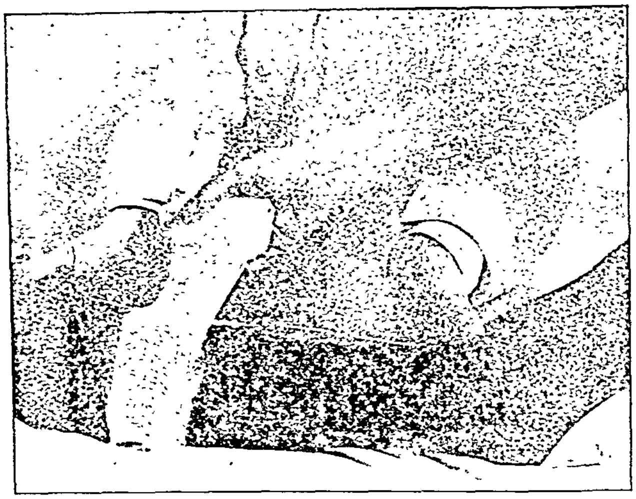

Figure 1.

The author's cast was designed while he was a house physician at Alexian Brothers' Hospital, Chicago. It was used satisfactorily by him on about forty cases and is still being used by his successors. This cast is applicable to any part of an extremity where a splint or a cast can be used.

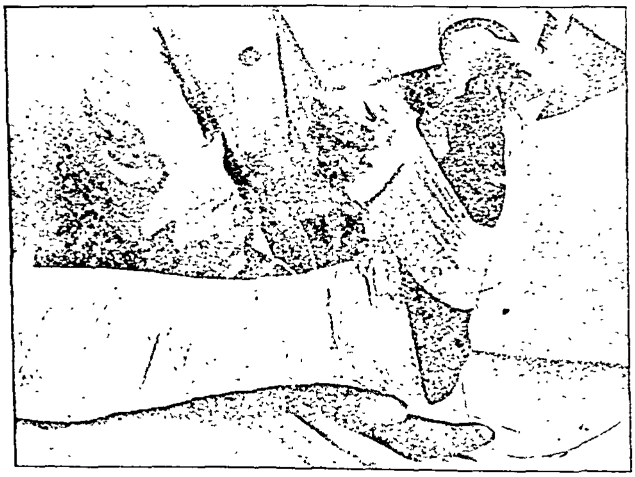

Figure 2.

For convenience a cast for Pott's fracture is described. The foot and leg are covered with a stocking or sheet cotton and a Gigli wire saw applied in the median line, anteriorly and posteriorly—these to be held in place by an assistant who also holds the fractured leg in the proper position. (Fig. 1.)

A few turns of the plaster bandage are then taken around the leg to hold the saws in place. A third saw is then applied along the sole of the foot and secured by a few turns of the bandage. (Fig. 2.)

The assistant can now busy himself with keeping the parts in proper position and alignment. The cast is then completed by applying successive turns of the plaster bandage, rubbing each turn smooth until it is in the closest possible contact with the one directly under it. It is well to make this cast a little thicker than the ordinary circular cast and care is necessary to make the portion over the foot and around the heel of equal strength as the rest of the cast. The only precaution necessary is to keep both ends of each saw free and avoid bending the saws at a sharp angle.

By the time the last bandage has been put on and the cast made smooth by rubbing with the flat of the hand, it will be hard enough to saw off. It need not be dry. A suitable handle or a small nail is attached to the loop in the end of the Gigli saw and by pulling the saw steadily until it moves freely the cast can be cut through in about ten seconds, leaving two straight edges. Fig. 3 shows the second stroke of the saw. The posterior and foot saws are removed in a similar manner and an ordinary roller bandage is put around the cast while it is still in position on the leg to hold the two halves together.

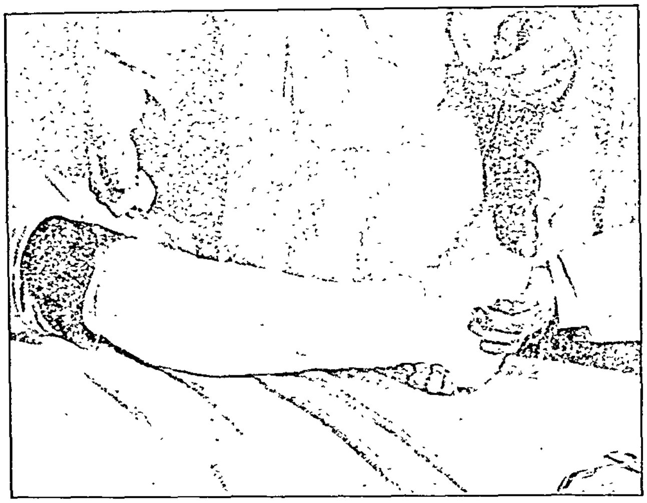

Figure 3.

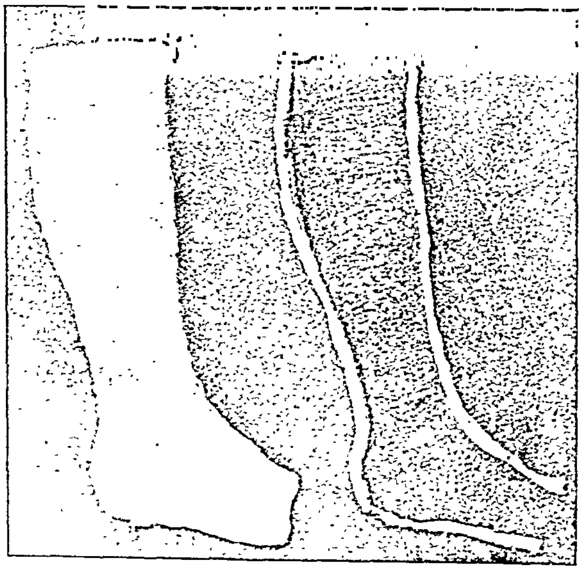

Figure 4.

If a stocking is used it must be split with a pair of scissors along the saw cut before the cast is removed and it then forms a good lining. If sheet cotton is used the leg should be covered by a new layer before reapplying the cast to take up the space occupied by the old cotton and form a comfortable lining.

This cast meets all the requirements of the modern treatment of fractures and has the double advantage of ease and rapidity of both application and removal. It is especially suited to Colles' fracture, because of the ease with which such a perfect-fitting splint can be made and the readiness with which it can be removed for inspection, massage and hot applications.

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STREPTOCOCCI AND THEIR RELATION TO SPECIFIC DISEASES.

When bacteriologic methods were first applied to the systematic study of human diseases, it was soon learned that streptococci were widely distributed in connection with various morbid processes. Control investigations in connection with normal individuals showed them to be also commonly, if not constantly, present on various mucous surfaces of the body, especially those of the mouth and throat. When more exact bacteriologic methods had been elaborated and the streptococci, which were isolated by the plate method, were studied as to their tinctorial, cultural and morphologic peculiarities, it was thought by careful investigators that the streptococci coming from different diseases could be distinguished by certain characteristic properties. On further study, however, it was found that these properties were not constant, but could be acquired or lost by each of the supposed forms. With the advent of agglutination and immunization tests for the detection and differentiation of bacterial species, it was hoped that if different forms of pathogenic streptococci existed they might be separated by these means.

From reports published by various investigators, we were led to believe that our hopes had been realized. By the application of these methods of study, Fritz Meyer claimed to have differentiated a variety of streptococcus which was characteristic for acute articular rheumatism, and which was the actual cause of this disease. He concluded that by agglutination phenomena the human streptococci can be separated into absolute varieties. For many years it has been known that streptococci are frequently associated with many of the complications of scarlet fever. Baginsky and Sommerfeld found them in the heart's blood and bone-marrow in almost every fatal case, and they appeared to be almost ready to assign them to a causal rôle in this disease. Moreover, Moser now applied agglutination tests to the streptococci cultivated from cases of scarlatina, and concluded that the scarlatinal streptococci were undoubtedly different from those found in other human diseases, such as erysipelas, sepsis, phlegmon, etc. Both Moser and Baginsky claimed to obtain favorable results in cases of scarlatina by the injection of antistreptococcic sera. The serum employed by Moser was obtained from horses which had been injected with cultures of streptococci obtained from cases of scarlatina and without previous passage through animals. Baginsky's serum was prepared by Aronson by the injection of horses with streptococci which had been rendered very virulent by manifold passage through mice. Each author claims special virtue for his own serum. Just as we were in high hopes that at last there was something tangible in our means of separating varieties of streptococci and in combating their effects in human disease, further studies have apparently shown that our expectations were without foundation. The statement of Baginsky that streptococci are constantly present in the blood in cases of scarlatina has been found to be untrue, except in cases terminating fatally after the third day of the disease. In a series of 100 cases in which a *bacteriologic examination of the blood* was made during life, Hektoen[1] found streptococci in only 12. Deneke examined the blood bacteriologically in a long series of fatal cases of scarlatina. In cases dying during the first 3 days of the disease, he found streptococci only once, but in cases which terminated fatally after the fifth day, streptococci were always present. He holds the idea that streptococci have any essential causal relation with scarlatina to be untenable. Rumpel has used Aronson's serum in 6 severe cases without a recovery, and Deneke has used it in 6 cases without any convincing benefit.

Aronson[2] has recently published some extensive observations on these matters. He has immunized a large number of horses with individual streptococci from various human diseases, the bacteria not having been previously passed through animals, and he has tested the agglutinating and protective properties of the sera from these horses on a great variety of streptococci. He concludes that it is impossible to determine the origin of any streptococcus culture by microscopic examination, by cultural methods, or by agglutination and immunization methods. He is unable to consider the streptococcus as the cause of so typical and characteristic a disease as scarlatina, but admits that it is the cause of most of the severe complications. He states that there is no specific scarlatinal serum, but urges the use of his antistreptococcic serum to combat complications. These observations appear to upset all our ideas as to streptococci which are characteristic of scarlatina and rheumatism. They also show that Aronson's serum which has been used by Baginsky is not to be considered as a specific scarlatinal serum as has been supposed to be the case by many. We are left with only a specific treatment for streptococcus infections in general, which must be subjected to further trial by impartial observers before it can be placed in its final place among our means for combating disease. Our experience in this connection is similar to that in many others. Certain bacteria have often been described as causes of diseases on insufficient data, and without accurate and discriminating observations. Control observations have too often been omitted, and can not be too strongly insisted on in all scientific investigations. The cautions we urged in our recent editorial[3] regarding extraordinary precaution in the whole technic of the agglutination test are especially apt here. Streptococci have been most elusive in escaping all efforts to obtain accurate knowledge as to their mode of action and to learn any means of overcoming their effects. Present failures must serve to stimulate further study with confidence that in time the difficulties which have so far been unsurmountable will be overcome.

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[1] THE JOURNAL A. M. A., March 14, 1903, 685.

[2] Deut. Med. Woch., 1903, No. xxv, 430.

PRIVATE PRACTICE AND HOSPITAL PRACTICE.

If one looks about him and considers the changes which are taking place in medical education, it is easy to see that there is a growing sentiment in favor of the extension of the plan of employing as teachers in medical colleges men who are not engaged in private practice. In the better medical schools the chairs of anatomy, physiology and pathology are already filled with men who devote their whole time to teaching and investigation. We understand that one of the Eastern universities has recently appointed a physician to the chair of internal medicine on the condition that he cease to do private practice and devote himself entirely to the work of the hospital and school. A leading university in the Middle West has advocated strongly the employment of two kinds of professors on its clinical staff, first, professors who give all of their time and energies to the university hospital and medical school, and, second, professors who give a part of their time to the hospital and medical school and the rest of it to private practice.

The advantages of having both kinds of professors in the clinical faculty are sufficiently obvious. Experience in the fundamental branches has shown clearly the advantage to the medical college of having men who, unworried by the cares of private practice and unfatigued by the labor the latter entails, have plenty of time to teach their subjects adequately to medical students and beside to pursue original investigations which contribute to the advancement of science in their particular fields. There can be no question that internal medicine, surgery and obstetrics will be better taught than they are now and that more rapid advances in diagnosis, prognosis, pathogenesis and treatment will be made when scientific men are similarly related to the clinical branches in our universities. Such men, paid salaries large enough to permit them to live respectably and maintain their families properly, could divide their time between the wards of the university hospital on the one hand and the hospital laboratories and library on the other, making observations in the former which would lead to the planning and carrying out of experimental work in the latter. The results of the laboratory work in turn would become applicable to improvement in the methods of study and treatment in the wards. The hospitals so used would probably be comparatively small and especially designed for purposes of investigation; only a few diseases need be studied at any one time, as the investigator prefers to confine his experimental researches to a rather small area for purposes of concentration and intensive study rather than to distribute his attention in any given period over too wide a range. Workers in such research hospitals would not wish to be hampered by too much teaching; they would prefer to be influential by the example they set of thoroughness and originality in procedure rather than by precept. They would gather about them the more advanced and more capable students and lead them into the higher walks of clinical study. By publication of the results of their own observations and experiments they would extend their teaching to other cities and to other lands far beyond the group of students in the school which employed them.

Great as would be the power of a few men of original ideas with strong personality in such research hospitals, the medical school would need also the teaching which the private practitioner of the better sort is so well prepared to give. For private practice is very different from hospital practice, at any rate as the latter exists at present. The hospital physician sees chiefly people who are very sick, men and women who are confined to bed with acute or severe chronic disease. Only in the outpatient department of the hospital does he see the minor ailments with which private practice has so largely to deal; further, in that department the cases are those of charity patients whose slight ailments differ largely from those from which the more well-to-do classes suffer, and when they are the same the treatment has to be very different, perforce, for the poor from that employed for those who are able to pay. The private practitioner is appealed to by men and women in active business or social life in the beginnings of disturbances; his patients are very often not incapacitated, but they are not well; they desire to be told how to correct their lives, what to eat, how much exercise to take and the like. While it is true that the physician in private practice when a teacher in a medical school can not show these patients to his pupils any more than the hospital teacher can, still he sees such patients daily and he can tell his students about them and give them at least some inkling of the best way of handling them. The systematic, vigorous, scientific training of the investigator in the research hospital can thus be most profitably supplemented by the intuition, tact and experience of the successful private practitioner.

COMPULSORY POSTMORTEMS.

Every physician must have experienced the feeling that is expressed in the following from a daily newspaper editorial. It is entitled "Compulsory Postmortems—They Would Weed Out Criminally Ignorant Doctors and Add Vastly to Medical Knowledge":

> When a human being dies this should be the first thought in the mind of the lawmaker and of the bereaved relatives: how can this death, which now causes individual sorrow, be made

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[3] THE JOURNAL A. M. A., Aug. 8, 1903.

> useful to all human beings? How can it be made a defense of others in future?
>
> Every doctor will tell you that invaluable information is lost because a sentimental feeling forbids making postmortem examinations. The fond relatives can not bear the thought of an operation being performed on the body of one that they loved. It is useless to tell them that the death is mysterious, that an explanation of its cause might save many lives. They think of nothing but the particular individual now dead. Out of sentiment for the one that has gone beyond help they refuse to help others.

The objections to postmortems are mainly sentimental, but to a certain extent they are fostered by religious beliefs. The same mistaken notions which have led an English bishop to declare against cremation induces many people at the present time to consider an examination of pathologic tissues sacrilegious and resist it with all the power they can exert. We believe, with the editorial quoted, that public opinion should be educated in this matter. "Almost everybody," it says, "now submits the corpse of his friend without hesitation to the process of embalming, which is a repulsive and almost utterly useless postmortem operation." The fact that a little knowledge of the conditions might be of utmost value to the living is never considered by the public, and yet it is a curious fact that when insurance companies demand an examination there is little difficulty in securing permission. Such is the power of self-interest as opposed to sentiment and religious objections.

What the editorial says in regard to the weeding out of unfit physicians by exposing their mistakes is in part true, though it would be unfair to say that mistakes are confined to the ignorant and unfit. The best of us make mistakes, and we desire postmortems in order to avoid making mistakes in the future. Therefore, any facts that the postmortem reveals which are contrary to the expressed views of those treating the patient before death should be given wide publicity before the medical profession. To give them to the public, however, would, in some cases, work an injustice. Still it would not be a serious harm and competent honest physicians could easily live down any possible temporary discredit that it might bring them.

The editorial further urges that compulsory autopsies would do away with much of the present antivivisection agitation by rendering vivisection useless. This argument has some force, though autopsies could not altogether fill the place of animal experimentation, and we believe that the same sentiment which opposes vivisection would oppose making postmortems a means of adding to knowledge. In the main, however, the article quoted in part contains so much good sense that we are glad to endorse it. We wish that every dubious diagnosis could be verified or corrected by an autopsy. The information obtained in such a case would be invaluable, especially in our larger centers where competent operators could be obtained. There is no true physician, we believe, but who would welcome such a regulation. Something, however, can be done in the way of public education as to the necessity and uses of the postmortem examination and more perhaps than by actual regulatory enactment.

ANOTHER DANGEROUS USE OF CELLULOID.

A dealer in London was recently arrested for selling so-called amber and gold cigarette holders which were retailed at the price of 6 shillings and produced at the cost of a shilling or less from celluloid and gilt metal. Celluloid is a useful substance, but it has its drawbacks. Its employment as a cigar holder seems to possess about as many drawbacks as any other use that might be suggested; it is not long since we read of an unfortunate Parisian whose celluloid nose blew up. We are afraid that some of these cigar holders will be found a source of danger to their possessors. The old-fashioned trick of loading pipes and cigars with gunpowder is humane in comparison with the possibilities of a practically guncotton cigar holder held in the mouth and ignited from a partially burned cigar or cigarette. We wonder how many "amber" celluloid cigar holders are in use and how soon we shall hear from them.

CAT GRAVEYARDS.

It is reported in the daily press that a society for the prevention of cruelty to animals in a leading Eastern town is promoting the establishment of a cemetery for dogs and cats and is soliciting subscriptions therefor. The city where this society exercises its function is already notable as the only one in the country containing a well-built—and we believe it is also well-endowed—asylum for homeless cats. While we do not object to zoöphily when it does not interfere with more important matters, it does seem to us that there is danger of overdoing this sort of thing. While so large a proportion of our own species suffers from neglect, and needs care in hospitals and asylums and lacks the means of decent burial, to establish hospitals and cemeteries for dogs and cats seems to us a *reductio ad absurdum* of benevolence. All animals should be humanely treated and, when they can not be cared for, should be mercifully killed to prevent suffering or abuse; some even, in memory of lives they have saved, deserve more, but a cemetery for dogs and cats will be pointed out as a curiosity and a proof of human folly rather than an evidence of intelligence or of humanity.

HYPNOTISM AN ANESTHETIC FOR MAJOR OPERATIONS.

The successful amputation of a limb under hypnotism is reported[1] in a patient suffering from necrosis of the bone and severe ulceration of the leg. In a previous operation the patient bore the anesthetic badly and hence wished to be relieved of the necessity of taking another. Hypnotism was used as a last resort. The operator refused to work unless the means for anesthesia were at hand, but fortunately their use was not required. The patient went through the operation successfully, and the temperature at no time was above normal. Recovery was uneventful except for a slight hemorrhage and sloughing of a portion of the flap, which was not accounted for. While we believe that hypnotism as a therapeutic remedy has long passed its heyday, its occasional use will doubtless still be heard from and may be—like other seldom-used but once-in-a-while-efficient remedies—found of value. We must take into account the fact that susceptibility to hypnotism is very variable, and while fifty or sixty years ago large numbers of cases of operations under this method were reported in India, it speedily passed out of use. Few operators, we venture to say, would ever now rely on it. As the *Lancet* says in its comments on the case, it can only be regarded to some extent as a curiosity, though the issue was favorable.

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[1] The Lancet, London, August 22.

PHYSICIANS' COMMISSIONS ON REFILLED PRESCRIPTIONS.

The Journal has received through a correspondent a copy of a circular letter sent out by a drug manufacturing firm, which we do not care to advertise here by a name, proposing to allow physicians 10 per cent. commission on the refills of prescriptions of the firm's preparations. They argue that the physician is entitled to something on the refilling of his prescriptions, but, under the usual practice, he alone of the trio—manufacturer, retailer and prescriber—does not profit. It is easy to see how the manufacturer hopes to increase his profits if the physician will only co-operate. The professional aspect of the transaction is another thing. No matter how excellent the products of this firm may be, and we know nothing about them, no ethical physician would accept a commission for prescriptions and much less we should say for their unauthorized repetition, as is implied in the circular letter referred to. It is only a bid for more business, with a rather cleverly devised trap for physicians included. If the ethical argument is not sufficient, those who are incapable of fully appreciating its force may also consider the fact that advertising proprietary remedies and encouraging the public into the practice of self-dosing with them, as is suggested by the circular, is a bad practice financially for the physician and physically for the patient.

Medical News.

CALIFORNIA.

In Memory of Dr. Gardner.—In memory of the late Dr. Matthew Gardner, San Francisco, and to show the high respect they bore him, the San Francisco County Medical Society, at its meeting, August 11, passed resolutions.

State Board Election.—The State Board of Medical Examiners has elected the following officers: Dr. Dudley Tait, San Francisco, president; Dr. Lewis A. Perce, Long Beach, vice-president; Dr. Charles L. Tisdale, Alameda, treasurer, and Dr. George G. Gere, San Francisco, secretary.

In the Toils.—"Dr." H. G. Wright, Cloverdale, was fined $100 for practicing medicine without a license in that town.——Ma Too Ting of Stockton, twice tried for practicing medicine without a license and on whose case two juries have disagreed, has been discharged.——"Dr." Myers, an optician of Hanford, found guilty of impersonating an agent of the State Board of Health and sentenced to 100 days in jail and a fine of $100, has been surrendered by his bondsmen, and is in jail in Fresno.

Physicians Injured.—Dr. William D. McDougall, San Jose, was seriously injured in a runaway accident, July 24.——Dr. Malek A. Southworth, San Jose, who was injured July 3, is rapidly recovering.——Dr James H. McLeod, Santa Rosa, was thrown from his buggy, July 7, sustaining a strain of the arm and a severe scalp wound.——Dr. Charles E. Turner, Vallejo, was thrown out of his buggy in a runaway accident, August 7, and fell on his back, causing concussion of the spine.

Personal.—Dr. Thaddeus S. Up de Graff, Pasadena, has returned from a trip round the world.——Dr. Dwight H. Trowbridge has been made a member of the Fresno Board of Health, vice Dr. George H. Aiken, resigned.——Dr. William F. Snow, Stanford University, has been appointed deputy health officer of Santa Clara County during the absence of Dr. Ray L. Wilbur in Europe.——Dr. W. R. T. McLain, Los Angeles, sailed for Europe, August 19.——Dr. and Mrs. Norman H. Morrison have returned to Los Angeles, after a trip to Hawaii.——Dr. Silas Johnson, Los Angeles, has returned to his work as a medical missionary on the west coast of Africa.

GEORGIA.

Georgia to Kansas.—Dr. Middleton L. Perry, Milledgeville, has been appointed superintendent of the new state hospital for epileptics at Parsons, Kan.

Hospital Staff Elects Officers.—The staff of Griffin Hospital has elected Dr. Robert H. Taylor, chairman; Dr. Thomas J. Collier, vice-chairman, and Dr. Joseph M. Thomas, secretary and treasurer.

State Board of Health Bill a Law.—The governor signed the State Board of Health bill, August 17. The bill provides for a board of eleven members, one from each congressional district, with a secretary whose office shall be in the capitol. The secretary is to receive a salary of $2,000 a year. The board elects its own president. The members receive no salaries, but are paid $5 a day when in attendance on meetings.

Appoints State Board of Health.—Governor Terrell has appointed the following members of the State Board of Health: Drs. F. M. Ridley, La Grange; Willis F. Westmoreland, Atlanta; Robert M. Harbin, Rome; Giles Hathcock, Belton; Charles Hickes, Dublin; William W. Owens, Savannah; Augustus P. Taylor, Thomasville; Millard S. Brown, Fort Valley; Howard J. Williams, Macon; Samuel C. Benedict, Athens, and James B. Morgan, Augusta.

ILLINOIS.

Personal.—Dr. Thomas W. Curry, Streator, has returned after an absence of five months in Europe.

Hospital Opened.—The new St. Mary's Hospital, Rockford, remodeled and newly equipped, is now open.

New Hospital for Evanston.—A new hospital, to be called the Grove House for Convalescents, is to be established in North Evanston. The building will cost $5,500 and will be ready in the early spring.

Smallpox Hospital Out of Commission.—After having maintained a smallpox hospital for two months, the authorities of Libertyville, Lake County, have decided that the town is free from smallpox, and have closed the hospital.

Magnetic Healers Held.—In the case of "Drs." Parker and Hall, the alleged magnetic healers, Judge Green, sitting at Pekin, has held that they are not entitled to their release, thereby intimating that the state has a case against them of sufficient strength to warrant their being held to await the action of the grand jury.

Chicago.

Assaulted While Saving Life.—While working to save the life of a woman who had swallowed carbolic acid Dr. William H. Crowley was attacked and beaten by a man. It was later alleged that the man was concerned in the woman's reason for attempted suicide.

Smallpox More Fatal.—The Department of Health reports that smallpox is of a more serious type this year than last. In 1902 there were 338 cases with only 5 deaths—a mortality rate of less than 1.5 per cent. Thus far this year there have been 346 cases and 45 deaths—a mortality rate of 13 per cent.

Medical Colleges Taxed.—The board of review has decided that medical colleges operated for profit shall be taxed on their equipments. Rush Medical College was taken under advisement; Hahnemann Medical College was not taxed; Chicago Homeopathic Hospital was taxed on $4,000, and the American College of Medicine and Surgery, Bennett Medical College and Jenner Medical College on $2,000 each.

Dearborn Medical College.—A new evening medical college held its opening exercises, September 1. Judge R. S. Tuthill delivered the opening address. About 175 students make up the initial enrollment. Dr. L. Blake Baldwin is president of the college and Dr. James L. Wells, secretary. The college building is that formerly occupied by Bennett Medical College, and later by the Chicago College of Pharmacy. A clinical building is now being erected.

Personal.—Dr., Mrs. and Miss Hotz have returned from a visit to Yellowstone Park.——Dr. Charles H. Parkes has returned after a year in Europe.——Dr. Joseph P. Smyth, has been elected high medical examiner of the Independent Order of Foresters.——Dr. and Mrs. Arthur D. Bevan are spending August in the White Mountains.——Dr., Mrs. and Miss Chew will return from Europe early next month.——Dr. and Mrs. Philip S. Doane have returned from Harbor Point, Mich.——Dr. Henry H. Everett has returned from a ten weeks' trip through New Mexico.——Dr. J. F. Biehn has been appointed assistant city bacteriologist, vice Dr. L. A. Kiernulff, resigned.

The Typhoid Situation.—The Department of Health reports that physicians are asking for far more laboratory examinations of suspected cases of typhoid fever than formerly. The disease is not on the increase to any extent. An investigation of twenty-two recent cases in the "ghetto" of the Nineteenth Ward was made by Medical Inspector Dr. Palmer Findlay, who reports that in sixteen families, where positive information could be obtained, untreated (unboiled) hydrant water was habitually used. No connection could be established between the cases and the milk supply. The sanitary conditions—including plumbing, vaults and closets—were "O. K.," "clean" or "fair" in fourteen cases and "bad," "full" or "in a filthy condition" in eight cases. The dense ignorance and unclean European habits of the denizens were the only obvious causes of the excess of the disease in this district.

INDIANA.

Gift to Hospital.—In accordance with the wish of her husband, the late Dr. William C. Eichelberger of Terre Haute, Mrs. Eichelberger has given all his surgical instruments and medical books, safe, office fixtures and furniture to the Union Hospital.

Dr. Brayton's Illness.—Dr. Alembert W. Brayton, Indianapolis, editor of the *Indiana Medical Journal*, who has been ill for several weeks, was operated on for abdominal abscess, August 25. The operation was successful, and Dr. Brayton is expected to make a rapid recovery.

Personal.—Dr. George D. Kahlo has succeeded Dr. Allison Maxwell as dean of the Central College of Physicians and Surgeons, Indianapolis. Dr. Maxwell will retain the chair of clinical medicine.——Dr. John A. Martin, La Fayette, surgeon at the Soldiers' Home, has resigned.

Deferred Union of Medical Colleges.—It is said that no further progress has been made in the proposed amalgamation of the Medical College of Indiana and Central College of Physicians and Surgeons. No definite conclusion has been reached, and it is said that each college will hold a separate session this year. Each college has issued its catalogue for the coming session.

In Trouble.—Mrs. Effie Watson, Martinsville, has been fined $25 for practicing medicine without a license. She is alleged to have practiced "cycopathy."——"Dr." Frank J. Sazofsky, also of Martinsville, has been fined $25 for practicing medicine without a license.——"Dr." James Charles, a manufacturer of electrical appliances of Richmond, has been indicted by the grand jury for practicing without a license.——An itinerant of Van Wert, Ohio, was recently arrested in Shelbyville for practicing without a license and selling medicine on the street, and was released on giving bond for his reappearance.

Disease and Death in July.—The regular monthly bulletin of the State Board of Health says:

> The health for July throughout the state is slightly better than in the preceding month, and was also better as compared with the corresponding month of last year. Diseases of the digestive tract were most prevalent. There was a great decrease in smallpox, as compared with the preceding month and with the corresponding month of last year. The order of prevalence of diseases was as follows: Diarrhea, cholera morbus, rheumatism, cholera infantum, typhoid fever, dysentery, tonsillitis, intermittent fever, bronchitis, scarlet fever, inflammation of bowels, measles, whooping cough, pleuritis, pneumonia, diphtheria and croup, erysipelas, influenza, puerperal fever, cerebrospinal meningitis.
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> There were 104 cases of smallpox with 4 deaths reported in 21 counties. In the corresponding month of last year there were 502 cases reported, with 15 deaths in 46 counties.
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> An interesting fact in conjunction with deaths by violence appears in the report from Evansville, where 10 persons were killed by mob violence. There were, in all, 13 murders during the month. The suicides numbered 30; males, 22; females, 8. The accidental deaths numbered 159. The deaths from tuberculosis numbered 360; males, 147, and females, 213. The married persons between the ages of 18 and 40 who died of the disease, leaving orphans, was 98. One hundred and fifty-two mothers died and 44 fathers, leaving 196 children under the age of 12. The total number of deaths from all causes for the month was 2,765, an annual rate of 12.9 per 1,000. The rate in the corresponding month last year was 13.6 per 1,000. By certain ages the deaths were: Under 1 year of age, 541, or 20.7 per cent. of the total; from 1 to 5 years, 214; 5 to 10 years, 55; 10 to 15 years, 75; 65 and over, 679, 26 per cent. of the total. By comparison with the same month last year we find the deaths of children under 1 year of age were greater. The percentage for June, 1902, was 19.6 per cent. of the total deaths Some important causes of deaths were as follows: Tuberculosis, 362; typhoid fever, 63; diphtheria, 13; scarlet fever, 12; measles, 6; whooping cough, 14; pneumonia, 77; diarrheal diseases, 313; influenza, 11; cancer, 108; violence, 102; smallpox, 4.

IOWA.

Eye Doctor Bound Over.—J. Edmund Wilson, an "eye doctor," who was arrested at Clarion, August 14, for practicing medicine without a license, has been bound over to the grand jury under bonds of $300.

Dr. La Force Improving.—Dr. D. A. La Force, one of the pioneer physicians of Ottumwa, was taken seriously ill while attending the G. A. R. reunion in San Francisco, and was in so dangerous condition that his son, Dr. William B. La Force, was telegraphed for. He is now reported as greatly improved, and is considered out of danger.

Personal.—Dr. Lewis Schooler, professor of surgery and clinical surgery in Drake University Medical Department, Des Moines, has resigned.——Dr. Earl Rice, Roland, has been seriously ill with blood poisoning following an operation wound.——Dr. Montrose Conley, Boone, has been appointed an interne in the Cook County (Ill.) Hospital for the Insane, Dunning.——Dr. James G. McAlvin, Grundy Center, will go abroad for a year's study.——Dr. Lawrence W. Littig, Iowa City, has been appointed lecturer on nervous diseases in the University of Iowa College of Medicine.

Cherokee Hospital Report.—The State Hospital for the Insane at Cherokee, opened August 15, 1902, had at the end of a year 619 inmates, 347 men and 272 women. The proportion of recoveries was 26 per cent., and of mortality 6.5 per cent. Of those who died, 24 per cent. were more than 70 years old. Since the opening of the inebriate department, Oct. 10, 1902, 151 males and 3 females have been admitted. Of these 28 escaped, and with 61 paroles, one death and transfers only 35 remained at the time of the report. Of the 154 patients, 118 used whiskey; 18, alcohol; 13, beer, and the remainder cocain or morphin.

KENTUCKY.

Dysentery Epidemic.—Dysentery is reported as epidemic in the Polkville neighborhood.

Verdict Against Physician.—In the case of G. B. Bailey against Dr. W. M. Lottridge, Newport, wherein $10,000 damages was claimed for alleged malpractice in the care of a broken leg, a jury awarded the plaintiff $2,000.

Personal.—Dr. Joseph M. Mathews, Louisville, has resigned from the faculty of the Hospital College of Medicine, and will devote himself to private practice.——He has been succeeded by Dr. George A. Hendon, formerly assistant to the chair of surgery.

House-to-House Inspection.—Health inspectors under the direction of Dr. Maverell K. Allen, health officer of Louisville, are making an inspection of the sanitary condition of every house in the city. The reports of the inspectors will be filed with the health officer, and will be kept up to date.

College Improvements.—The trustees of Central University have sanctioned the expenditure of about $15,000 for remodeling the building of the Hospital College of Medicine, Louisville. Two new laboratories and new amphitheaters and section rooms are to be built, and the grounds of the school are to be beautified.

Where They Spent Their Vacations.—Dr. Joseph M. Mathews, at Harbor Springs, Mich.; Dr. Lewis S. McMurtry, in Canada; Dr. Thomas Hunt Stucky, at Atlantic City; Dr. Henry Enos Tuley, at Reserve, Wis., fishing; Dr. John G. Cecil, on the Pacific Coast and Yellowstone Park; Dr. Curran Pope, at Michigan resorts; Dr. Orville Kennedy, at Grayson Springs, Ky.; Dr. J. Rowan Morrison, at White Sulphur Springs, Va.; Dr. James S. Chenoweth, in Maine, and Dr. J. B. Marvin, at Cape Cod, Mass.

LOUISIANA.

Low Mortality.—The mortality in New Orleans for the first week in August was at the annual rate of 14.66 per 1,000 for whites and 21.98 for negroes, or a total rate of 16.60.

Personal.—Dr. Jefferson D. Bloom, house surgeon of Charity Hospital, New Orleans, for more than seven years, has resigned.——Dr. C. Jeff Miller has been elected to the chair of surgery in the New Orleans Polyclinic.

Bad Milk.—Numerous complaints have been made of the milk supply of New Orleans. Several cases of poisoning from tyrotoxicon and from adulterated milk have been reported. The City Board of Health has preferred charges against a number of milk dealers and proposes to adopt a vigorous campaign for a pure milk supply.

Sewage and Water System for New Orleans.—The work of constructing the vast system of sewage, water and drainage, which is to place New Orleans abreast of the best sanitated cities of the world, and which is to cost, roughly, $18,000,000, is already well in hand. The great undertaking is to be finally completed within the next five years. The movement which culminated in this great work followed the epidemic of fever in 1898. The system is to be fully described and illustrated in The Journal in a few weeks.

Charity Hospital Staff.—At a recent meeting of the board of administrators of the Charity Hospital, Dr. J M. Batchelor was elected house surgeon, to succeed Dr. J. D. Bloom, who resigned after a service of sixteen years. Dr. J. A. Danna was promoted from second to first assistant house surgeon, and Dr. S. W. Stafford was elected second assistant. It was determined by the board that in the future the second assistant should be selected by competitive examination. The term of house surgeon was by resolution limited to six years. The board also adopted resolutions denying the truth of the rumor as to its policy in regard to the Sisters of Charity. The latter are not to be disturbed in any way.

Mitigate Quarantine Regulations.—At a conference of the state quarantine officials of Louisiana, Alabama and Texas, held recently in New Orleans an agreement was reached, which will greatly mitigate the quarantine regulations controlling travel and commerce from Cuba to ports on the Gulf of Mexico. The following was the resolution adopted:

> *Resolved,* That on and after August 6 all uninfected vessels from clean Cuban ports be admitted to free pratique after thorough inspection at the quarantine station, including taking the temperatures of all on board, disinfection of soiled clothing and containers and other suspected articles, either by steam heat or formaldehyd. and that passengers from Cuban ports be permitted entry without further restrictions, provided that each passenger furnishes a certificate from the chief medical officer of the Cuban port of departure stating that said passenger has resided not less than five days in Cuba prior to sailing from that island. Agents of steamship lines in Havana, on delivering their tickets to passengers, shall instruct them to place all their soiled clothes and linen in a separate bag, trunk or box in order to simplify quarantine regulations at the home port.
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> Should any soiled clothes and linen be found among unsoiled clothes and linen the whole package shall be disinfected.
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> The vessel may be disinfected at the direction of the quarantine authorities.

MISSOURI.

Due to Floods.—The death rate of Kansas City for July was the highest in the history of the city, 324 deaths having been reported. Of these, 24 were caused by typhoid fever, due to unsanitary conditions following the recent flood and the drinking of impure water.

Bacilli in Street-Car Sweepings.—The St. Louis Transit Company has begun a scientific investigation of the sweepings from street cars to discover a means of keeping the cars sanitarily clean. Bacteriologist Stolpher has submitted a report showing that as the result of his examinations of car sweepings for a week, all the cars contained tetanus and tuberculosis bacilli.

Professor Acknowledges Fraud.—Dr. Frank O. Reynolds, professor of bacteriology, microscopy and hematology in Ensworth Medical College, St. Joseph, and curator of the college museum, on account of his acknowledged connection with "the New York Hospital Company of St. Joseph," a fraudulent scheme, was requested to tender his resignation, promptly did so, and it was as promptly accepted.

To Prosecute Unlicensed Physicians.—The chief of police of St. Louis, on request of the health commissioner, has instructed each patrolman to get the names and addresses of all physicians on his beat. When the returns are complete the lists are to be sent to the health commissioner, who will sort out those known not to be reputable. Those who are found to be practicing without having complied with the state laws will be prosecuted.

NEW YORK.

New Hospitals at Albany.—Two new hospitals will be built at Albany, one a smallpox hospital, the other a pavilion for the reception and care of patients suffering from contagious disease.

For Dr. Richardson's Place.—Dr. William A. White, first assistant of the Binghamton State Hospital, has received from the Secretary of the Interior the appointment as superintendent for the Government Hospital for the Insane at Washington, D. C., vice Dr. Alonzo B. Richardson, deceased.

Buffalo Personals.—Drs. John H. Mesmer, E. J. Meyer and Henry Buswell have gone to Northern Canada on a fishing trip. ——Dr. James W. Putnam has returned from Magnolia.——Dr. Frank W. McGuire was appointed gynecologist to the Buffalo German Hospital, vice Dr. Herman E. Hayd, appointed surgeon. ——Drs. Irving M. Snow and Lillian Craig Randall are in Europe.

To Examine Condemned Criminals.—Governor Odell has appointed Dr. Eugene H. Howard and Dr. Arthur W. Hurd medical superintendents of the Rochester and Buffalo State hospitals, respectively, to examine the mental condition of Patrick Conklin, awaiting execution at Sing Sing. Dr. Henry E. Allison of Matteawan and Dr. Morris G. Ashley of Middletown were also appointed to examine Clarence Equar, awaiting execution at Auburn state prison.

Radium and Blindness.—Dr. Almon Jenkins and Mr. W. J. Hammer, an electrical engineer, are engaged in some interesting experiments with radium on a blind girl. That the optic nerve of this child is practically dead would seem to be shown by the fact that it is stated that the child saw nothing when magnesium ribbon was burned before her eyes, yet it is claimed that under the conjoined action of the x-ray and radium the child declared that she saw light. While there is no likelihood that these experiments have any practical bearing, they are of interest in connection with a study of the marvelous properties of the new substance radium.

Pure Water for Ithaca.—The turbine pumps which deliver water to the new Fulton plant of the Ithaca Water Company were set in motion, and the citizens of Ithaca and the students of Cornell are assured of an abundant supply of pure water Although tests had been in progress in the plant several days, no announcement was made until yesterday that it was ready for operation. Six months ago Cornell loaned to the Ithaca Water Company $150,000 for the building of the purification plant, and work has been continuous since. The water, as soon as delivered to the receiving wells, is charged with a solution of sulphate of alumina, which forms a white, flaky precipitate. The water is then passed into coagulating basins, where 70 per cent. of its impurities settle. It is then passed through six filters of a capacity of 3,000,000 gallons daily.

OHIO.

Hospital Gets Library.—Dr. James C. Culbertson, Cincinnati, editor of the *Lancet-Clinic* and member of the board of education, has given his medical library of over four hundred bound volumes to the City Hospital medical library.

Personal.—Dr. Peter Donnelly, Toledo, has been appointed a member of the local board of health.——Dr. Guy H. Williams has been appointed assistant physician at the Columbus State Hospital, vice Dr. Ralph Holmes, who has accepted a similar position at the Ohio Hospital for Epileptics, Gallipolis.——Dr. and Mrs. Charles J. Shepard, Columbus, sail for Europe on the *Moltke*, October 1.

Almost Free from Smallpox.—Dr. C. O. Probst, secretary of the State Board of Health, announced, August 20, that Ohio was practically free of smallpox. There was then only one place in Ohio that had anything bordering on an epidemic, there being 18 cases at Massillon. Cleveland has discharged the last patient from the pest house and is free from the pest for the first time in many months.

New Hospital in Cleveland.—A new hospital has been opened in Cleveland under the name of "The Mt. Sinai Hospital of Cleveland, Ohio," by philanthropic Jewish citizens. It is strictly non-sectarian. It is well equipped to accommodate thirty-five patients, with ward and private beds. The staff is made up as follows: Surgeons—Drs. George W. Crile, Carl A. Hamann and Frank E. Bunts; gynecologists—Drs. Marcus Rosenwasser, W. Lincoln and John J. Thomas; orthopedic surgeon—Dr. Walter G. Stern; pediatrists—Drs. Nathan Weidenthal, and McMichael; eye—Dr. William E. Shackelton; nose and throat—Dr. Henry B. Stotter; skin—Dr. Samuel Rigelhaupt; nervous diseases—Drs. Moritz Lowenthal and Isidor Belkowsky; internal medicine—Drs. Arnold Peskind, Friedman, Emanuel Rosenberg, Louis Robecheck, David B. Steuer, Alfred S. Maschke, Daniel Heimlich, Kaplin, Isador J. Propper, Maurice Budwig and Myron Metzenbaum. Dr. Bunts is president and Dr. Stern secretary.

PENNSYLVANIA.

Typhoid in Schuylkill County.—An epidemic of typhoid fever is reported in Schuylkill county, there being many cases at Ashland, Pine Grove and Pottsville.

Dogs Quarantined.—The State Live Stock Sanitary Board, because of evidence of rabies existing among the dogs of Columbia County, has ordered all quarantined for a period of 90 days.

Dairyman Fined.—A dairyman at Mahanoy City, pleading guilty of using formaldehyd in milk, was recently fined $100 and costs amounting to $19.64; and a Locust Valley farmer for using ice in his milk was fined $62.50, including costs.

Philadelphia.

Phipps Institute.—The educational work of the Phipps Institute was opened on August 25 by Dr. Ward Brunton, one of the physicians of the institution, who gave to a lay audience a lecture on "The Cause and Prevention of Tuberculosis."

Public Playground.—The thirty-five playgrounds, mostly school yards, which have been open in different sections of the city during the summer under the auspices of the Board of Education, closed August 28. The total attendance for July was 158,646. This seems a practical contribution to the health of the children of the poor.

The New Filtering System.—Chief Hill of the filtration bureau has published a series of results of recently completed sand filters of the new system being installed. The results are the best ever attained by such methods. On August 8 the Schuylkill river water showed 42,000 bacteria per c.c.; one of the Lower Roxborough filters reduced the number to 12, while the poorest showing was 68 to the cubic centimeter. This filter system will be described in The Journal in the near future.

Reports of Contagious Diseases.—The Department of Public Health and Charities, to facilitate the report of contagious diseases, has sent to each physician postal cards properly printed for such reports. A circular letter accompanies the cards asking special aid of the profession in stamping out smallpox. To this end a request is made that all cases of chicken-pox be reported, and that especial influence be exerted toward having all persons vaccinated who are not so protected. The office of the bureau of health will hereafter be open night and day and never closed. In order to impress the public with the necessity of vaccination, the bureau is distributing a circular, citing a number of concrete examples of the manner in which vaccination protects. Among other examples cited, it is pointed out that of the 2,600 smallpox patients admitted to the Municipal Hospital within the last two years there was *not one* person who had been recently successfully vaccinated.

GENERAL.

Leprosy Scare in Porto Rico.—The people of this island are much alarmed over the discovery that fowls, produce and other articles were freely brought from the leper settlement to San Juan. The regulations of the settlement were said to be very lax.

The Reed Memorial Fund.—The committees appointed for the purpose by the American Medical Association, the American Association for the Advancement of Science, and the Congress of American Physicians and Surgeons met, August 15, in Bar Harbor, together with friends of the late Major Reed, M.D., U. S. A. Representative men were present from different parts of the country, and letters were received from various members of committees already appointed to promote the collection of a memorial fund in grateful commemoration of Dr. Reed's services in connection with yellow fever. Important suggestions were presented from President Eliot, Dr. W. W. Keen, Prof. J. W. Mallet and others. Dr. Daniel C. Gilman, chairman of a committee appointed by the American Association for the Advancement of Science, presided, and Dr. Stuart Paton acted as secretary. Among those who took part in the conference were Dr. W. H. Welch of Baltimore, Dr. Janeway of New York, Dr. Abbott of Philadelphia, Dr. Herter of New York, Dr. Barker of Chicago, Dr. Putnam of Buffalo, Dr. Fremont Smith of Bar Harbor and Dr. Sajous of Philadelphia, and beside these medical gentlemen, Bishop Lawrence of Massachusetts and Messrs. Morris K. Jesup, president of the New York Chamber of Commerce, John S. Kennedy, president of the Presbyterian Hospital of New York and William J. Schiffelin of New York. The following conclusions were reached: That an effort should be made to raise a memorial fund of $25,000 or more, the income to be given to the widow and daughter of Dr. Reed, and after their decease the principal to be appropriated either to the promotion of researches in Dr. Reed's special field, or to the erection of a memorial in his honor at Washington. Arrangements were made for the publication of circulars explaining this movement, and asking co-operation not only from the medical profession, but from all liberally disposed individuals who appreciate the value of Dr. Reed's services to mankind.

FOREIGN.

The Next International Dermatological Congress.—The fifth congress will meet in Berlin, Germany, September 13 to 17, 1904. The following subjects have been selected by the officers of the congress for discussion: "The Syphilitic Affections of the Circulatory Apparatus," "The Diseases of the Skin in Anomalies of Metabolism," and "Epitheliomas and Their Treatment." Dr. James Nevins Hyde, 100 State St., Chicago, has been appointed secretary for America.

The First German Total Abstinence Congress was opened, August 8, with simultaneous subsidiary societies of teachers, women, clergymen, etc. The Berlin correspondent of the *Muenchener Med. Woch.* notes that there are no special branches of total abstaining physicians, and rather offers his congratulations that the number of abstainers among German students is something hardly more than one-tenth of 1 per cent. Nevertheless he states that at the same time with the Total Abstinence Congress a general meeting of the world-wide Good Templars Order was held, which in Germany at the present time has some 625 lodges with almost 20,000 members and has in late years added nearly 4,000 to its membership.

LONDON LETTER.

Dinner to Mr. Jonathan Hutchison.

A complimentary dinner has been given to Mr. Jonathan Hutchinson on his seventy-fifth birthday by the members of the profession. Sir H. G. Howse, late president of the Royal College of Surgeons, presided, and covers were laid for 154 guests. In proposing the health of Mr. Hutchinson the chairman said that he was a professional of 53 years' standing, and the astonishing virility and vitality he had shown within the last two or three years was not an unfitting part of his career. Who among them, he asked, would, at the age of 73, undertake a long journey to South Africa in search of facts which might damn or support an hypothesis, and who would subsequently undertake a similar journey to India? Though the occasion was Mr. Hutchinson's 75h birthday, they still hoped to see more of his work, for he was still capable of studying facts which would be useful to the profession in the future. Sir Joseph Fayrer, who also spoke to the toast, remarked that he had always read Mr. Hutchinson's books with profit, and had learned to look on him with profound respect. What had struck him most was the energy with which Mr. Hutchinson had pursued his studies up to his 75th year with fidelity of conscience and with the true scientific spirit, always striving to ascertain what was right simply for the sake of right. Mr. Hutchinson, in response, referred to the healthy feeling and pride he felt in knowing that he had gained the esteem of so many influential friends. Such recognition helped him on in his work. This, of course, was not the highest motive, but though one should be actuated by high motives it was no harm to have them reinforced by lower ones. He thanked Sir Joseph Fayrer for mentioning fidelity to conscience. This he had been brought up in from his youth by the Society of Quakers, among whom the one dogma was conscience. Turning to the question of leprosy he related how, when visiting Robben Island (near Cape Town) he saw 500 persons confined for life because the medical profession were too indolent to pay proper attention to facts. Leprosy was not contagious, and yet on Robben Island were confined the children of white parents condemned to association with Kaffirs and Hottentots. Therein lay a motive for work in what remained to him of life—to render the profession alive to its duty with regard to leprosy. Poetry had always inspired him with motives for dry scientific work. He always tried to act up to the motto of the German poet, "Keep true to the dream of your youth." He also quoted with approval the view of a Swedish writer as to the distinction between fame and immortality. Fame consisted merely in having one's name known and diffused about, but immortality consisted in having one's work taken up and carried on by one's fellows, though one's name might be forgotten.

The Professorship of Surgery at the University of Cambridge.

Mr. Howard Marsh, surgeon to St. Bartholomew's Hospital, has been appointed professor of surgery in the University of Cambridge in succession to the late Sir G. M. H. Humphry, since whose death seven years ago the professorship has been suspended.

Correspondence.

Notes from Paris and Berck.

Paris, August, 1903.

To the Editor:—Berck-sur-mer, a health resort on the Normandie coast, is best known outside of France through the work of Dr. L. Calot in the treatment of tuberculous and deformed children. On Dr. Calot's invitation the writer drove directly to his private hospital, a fine large building on the elevated drive facing the broad, sandy beach, where a fleet of some fifty dark fishing smacks was stranded. The hospital is managed by sisters of charity, and is very complete in all its appointments; the rooms are large, and most of them connect with balconies, where the patient can pass his time in the open air if unable to go to the beach. Most of the children, however, play on the beach; many who are unable to walk being carried out and placed on mattresses on carts. While much less use seems to be made of mechanical supports or of operative treatment than is the rule with us, the chubby appearance and ruddy faces of the children testified to the beneficial effects of this mode of life.

Dr. Calot begins his daily clinic at 4 p. m. in a spacious and well-appointed building connected with the hospital. There is a series of roomy offices and operating rooms and waiting rooms, affording every facility and convenience. A feature of the work is the injection treatment of tuberculous joints, glands, abscesses and sinuses. Cold abscesses are never opened; joints and glands are never excised, but are injected with iodoform-guaiac and camphorated naphthol every three or four days. The hips and spine, however, are not well suited to the injection treatment. Inflamed joints are immobilized in plaster splints, in which a window is cut for access to the joint, and if the case is acute the patient is kept recumbent. By these means combined with the sea air and sunshine many cases are cured without suppuration. Dr. Calot's method of forcible correction of the kyphotic spine was at one time very largely practiced, but is now used in a much milder form, even by its author. A corrective jacket was applied during suspension in the ordinary way and without anesthesia; the jacket, however, reached over the shoulders and included the neck, chin and occiput. While the plaster was hardening manual pressure was made over the kyphos. Afterward a large fenestra was cut in front and behind, the posterior opening being stuffed tightly with a large quantity of cotton, which was bandaged on. Dr. Calot believes that he is able in this way to exert a great deal of pressure on the kyphos without danger of a pressure sore. Dr. Calot has modified the technic of the replacement of congenital hip dislocation, by adding a strong inward rotation after the hip is reduced, either at the same sitting or a few days later, by which means he believes the head is forced more strongly and exactly into the acetabulum. His cases are all *x*-rayed in the operating room at the time of operation, and as in Liverpool and Paris. The finished plate is shown "while you wait." A long plaster spica is applied with the knee flexed, and the patient does not walk. In one case examined the patient was walking without support after five months' treatment, and by palpation, measurement and *x*-ray the reduction seemed perfect. As a rule treatment is over in five or six months. The writer left much impressed with Dr. Calot's kindness, earnestness and skill, and with the value of the open air and beach treatment of bone and joint tuberculosis.

In Paris the writer was so fortunate as to meet both Professor Kirmisson and Dr. Redard, both well known in America by their work and writings. Dr. Redard, who has just been distinguished by the red button of the officer of the legion of honor, devotes two mornings a week to the orthopedic service at the Furtado-Heine dispensary, a large, modern building in the Rue Delbet. Through Dr. Redard's extreme kindness, the writer was present at a private operation for manual replacement of a congenitally-dislocated hip in a rather thin girl of twelve. It was surprising to observe that the movements were made with great deliberation, with pauses between the different steps, and with no manipulation of the adductors, which readily yielded to the steady stretching, and in less than twenty minutes the hip was in place, without violence, bruising or injury. The ease and skill with which this was done were a revelation. It was noticed that during reposition the thigh was strongly flexed. The short spica is left off in five or six months.

Dr. Kirmisson, who occupies the chair of surgery of children in the University of Paris, spends several hours every morning at the fine new Hôpital Trousseau. He studies his cases very carefully, and impresses one by his good sense, moderation, and excellent judgment. He is opposed, as a rule, to the excision of joints in children, treats tuberculous abscesses and sinuses by the injection of iodoform-ether, and when there is acute disease keeps the patient in bed. Professor Kirmisson is not enthusiastic about tenoplasty in infantile paralysis, but thinks highly of arthrodesis. He spoke of the lack of careful reports of final results. In the manual replacement of congenital hip luxation, Professor Kirmisson lays great stress on reduction over the inferior border of the acetabulum, which he believes is much easier. It is effected by extreme flexion followed by external rotation, after the hip has been brought down and the resistance of the adductors overcome in the usual way.

After the work at the Trousseau, Professor Kirmisson goes each Wednesday to his ambulant clinic at the Hôtel Dieu, as he says, to observe the results of other methods of treatment. Curiously, on the day when the writer was present, three adults whose hips had been excised in childhood presented themselves. Everyone was horribly crippled, with a short, weak, deformed and nearly useless leg, and furnished a strong argument for Professor Kirmisson's conservatism. In answer to a question as to the use of passive movements in a sensitive joint, he said avoid all rough and violent movements, and if gentle movements are painful desist. "If you wish to ankylose a joint, hurt your patient." The writer feels under great obligation to Dr. Calot, Dr. Redard, Professor Kirmisson not only for their kindness and many personal attentions, but for the many valuable ideas he received from them.

Henry Ling Taylor.

Medical Contingent Fees.

Chicago, Aug. 26, 1903.

To the Editor:—In the August 22 issue of The Journal of the American Medical Association is an account of a damage case recently tried in a Colorado court which furnishes The Journal with an item for editorial comment under the heading "Medical Contingent Fees." It was admitted by the physicians for the plaintiff that the fees were contingent, that is, that they were to receive a certain percentage of the amount recovered for their services. The attorneys for the defendant corporation made the most of this admission and took the ground that it was contrary to good policy and morals. The physicians claimed that the transaction was an innocent one, that as the injured person was poor she was allowed to contract to pay her bill in this way.

Such a case as this brings up the whole vexed question of medical expert testimony, which furnishes such a fruitful theme for medical addresses and articles. Some few years ago the writer of this letter examined one of the yearly volumes of the *Index Medicus* and found 252 titles dealing with various phases of this problem.

The compensation of the medical expert witness is one of some difficulty. In certain states of the union it has been held that an expert, meaning by that one who gave open evidence and of necessity who had to specially qualify himself to advise the court in such matters, was entitled to a fee commensurate with the time and effort necessary. Other courts have held, notably Illinois, that an expert medical witness could not refuse to testify because he had not been compensated. The courts in this state, in accordance with that of most states which have rendered decisions along this line, have held that while the physician or other expert could not refuse to testify providing he had an opinion, yet there was no way in which he could be compelled to form an opinion. He could not be made to examine facts nor to consult books nor, indeed, to set his mental machinery in operation so that he would have an opinion on a given set of facts. It will be seen that such a limitation of the decision practically makes it impossible to get expert testimony in our courts unless it is paid for. In almost every case to be of much value a physical examination of a patient must be made or there must be a careful study of a personal history or other matters, and this will not be undertaken by a physician unless it is with the understanding that he is to be compensated for the time that is required. Primarily it will be seen that all courts have recognized the necessity of opinion testimony and the fact that it requires time and effort to prepare it, and for this reason the one who gives it is entitled to a higher compensation than ordinary witness fees. Cases occasionally arise like that which is commented on by The Journal, in which a poor person is a litigant. It is probable that he can not pay his physician for the medical services, and if he is able to do that, there are many worthy litigants who would not be able to adequately compensate experts for going into court to properly present their case. It is manifestly optional with the physician whether he shall give a person credit for the amount of his fees. If he does so, and the person is very poor, it is evident that his compensation will depend on the fact of recovery. This is an unavoidable conclusion growing out of the nature of the transaction.

The chief objection against the method followed in the Colorado court is that the physicians agreed to take a certain percentage of the amount recovered. This is clearly bad practice; the amount of time required in preparing a case and in testifying is not greater where a large verdict is recovered than where a small one is obtained. The charge in all such cases should be for time, and should be based on the amount which the physician receives for similar service in which the fee is not contingent. If the amount of the fee is agreed on beforehand, there surely can be no objection if the physician chooses to wait for his fee. But to make the amount of the fee depend on the amount recovered, that gives the transaction the character that it ought not to have. On the other hand, to insist that every plaintiff should pay his expert witnesses for their services before they were allowed to testify would throw a burden on many worthy plaintiffs which in many instances would prevent their properly presenting their cases in court.

The whole subject of expert testimony in general and of medical expert testimony in particular is one that is sadly in need of revision. The enormous increase in personal injury litigation, the character of attorneys engaged in this class of work, and the kind of medical testimony which is frequently heard in our courts can not but lead to the view that some change in the near future will be necessary. Just what that change ought to be it is difficult to say. Of necessity there must be some statutory alteration, but these changes should be made with the utmost care, as any interference with the practice of our courts in a drastic manner is often more harmful than beneficial.

Harold N. Moyer, M.D.

The Alleged Cure for Lockjaw.

Chicago, Aug. 29, 1903.

To the Editor:—Through an error, I gave the wrong quantity of sodium chlorid in the formula which I used in the case of tetanus, described in The Journal, Aug. 29, 1903, page 566. The strength given is not dangerous, but is not advisable. The correct formula is:

℞.	Sodii chloridi	3	656+
	Sodii sulphatis	10	06+
	Sodii citratis	3	364+
	Calcii chloridi	0	136+
	Aquæ	1000	00

The formula preceding this—the m/8, etc., formula—was correct.

S. A. Matthews, M.D.

State Boards of Registration.

Indiana Examination Questions.—The following were the questions used for the examination of candidates to practice medicine at the semi-annual examination of the Indiana State Board of Medical Registration and Examination, at Indianapolis, July 14 to 16, 1903, as furnished by Dr. W. T. Gott, Crawfordsville, secretary.

ANATOMY.

1. Describe the palmar fascia. 2. Give the origin, course and distribution of the internal iliac artery. 3. Give the names of the muscles of the palmar region. 4. Describe an artery. 5. Give the relation of the ureters to the pelvic organs in the female. 6. What abdominal viscera has ligamentous attachment to the diaphragm, and give the names and location of the ligaments? 7. Give the names and a description of the lobes of the lungs. 8. Describe the ligaments of the uterus. 9. At what situation can the subclavian artery be compressed from the surface? Give the anatomic relations that make this possible. 10. Name the muscles of the larynx.

PHYSIOLOGY.

1. Describe the pulmonic circulation. 2. Define (*a*) anastomosis, (*b*) metabolism, (*c*) anabolism, (*d*) catabolism. 3. What is the composition of the chyle? 4. Describe the lymphatic circulation. 5. What is the normal amount of urine voided by an adult in twenty-four hours, and what physiologic conditions cause a variation from this amount? 6. How would you proceed to make a blood count? 7. What are the five chief functions of the stomach? 8. Describe the nerve control of the urinary bladder. 9. What are the chief factors concerned in stimulating the secretion of gastric juice? 10. How would you make a quantitative analysis of the gastric juice?

OBSTETRICS.

1. Give causes, symptoms and treatment of inversion of the uterus. 2. Name one or more causes of hour-glass contraction of the uterus. Give treatment. 3. State most common cause of morbid retention of the placenta. 4. When should cesarean section be performed? 5. Give probable cause and treatment of puerperal mania. 6. Give treatment of puerperal septicemia. 7. Describe the kyphotic pelvis. 8. How long should the mother keep her bed after labor? 9. Describe Sylvester's method of artificial respiration. 10. State best method of inducing premature labor when it is designed to save the child's life.

GYNECOLOGY.

1. Name the physiologic periods of woman. 2. Give the principal procedures in local treatment. 3. Give preparation for aseptic abdominal operation, (*a*) preparation of the operator and assistants, (*b*) preparation of the instruments, etc., (*c*) preparation of the patient. 4. Define hypodermoclysis, giving technic of operation. 5. Give etiology, pathology, diagnosis and treatment of acute metritis. 6. Give indications for curettage and describe operation. 7. Give indications for hysterectomy and describe operation. 8. Give differentiations of tubercular and gonorrheal cystitis. 9. Give differentiation of renal and ovarian cysts. 10. Give diagnosis and operation for urethrovaginal fistula.

MATERIA MEDICA AND THERAPEUTICS (REGULAR).

1. Name the route by which medicinal agents may be introduced into the organism. 2. Name a medicinal agent which (*a*) raises blood pressure, (*b*) lowers it, and give the physiologic action of each. 3. Name a medicinal agent which increases the renal function, and give an indication for its use. 4. Name a medicinal agent which increases the function of the skin, and give an indication for its use. 5. Define (*a*) decoction, and (*b*) infusion. 6. Give the derivation of quinin and its therapy. 7. How does ergot arrest uterine hemorrhage? 8. Write a prescription for an expectorant suitable for the first stage of acute bronchitis. 9. Write a prescription for a general tonic. 10. Write a prescription for an emetic.

MATERIA MEDICA AND THERAPEUTICS (ECLECTIC).

1. Name two therapeutic remedies, one of which will contract the pupil and the other dilate it. 2. Give indications when you would give the following remedies, stating dose of each: *Asclepias*; 3, oenantha; 4, solanum car; 5, hydrastis; 6, cuprum; 7, colocynth; 8, apocynum. 9. Give indications for an acid—an alkali. 10. Write a prescription for an irritative cough, such as is often found associated with measles.

MATERIA MEDICA AND THERAPEUTICS (HOMEOPATHIC).

1. Chloroform—give therapeutic action. 2. Chimaphila umbellata—give habitat and indications for use. 3. Cholidonium—name three special centers of action. 4. Carbo-vegetabili—give therapeutic individuality. 5. Capsicum annuum—give therapeutic individuality. 6. Cantharides—name special centers of action. 7. Cannabic sativa—give anecdote and special centers of action. 8. Bryonia alba—give therapeutic individuality. 9. Pharmacology—define. 10. Kali bichromicum—give effects on mucous membranes.

THEORY AND PRACTICE OF MEDICINE (REGULAR).

1. Give predisposing cause, pathology, symptoms and prognosis of arteriosclerosis of the cerebral arteries. 2. Give predisposing cause and symptoms of cerebral hemorrhage. 3. Give exciting

cause and physical signs of croupous pneumonia. 4. Give predisposing cause and treatment of pulmonary hemorrhage. 5. Give physical signs of pleuritic effusion. 6. Give exciting cause, symptoms and treatment of typhoid fever. 7. Give common cause, symptoms and treatm [illegible] in infants. 8. Give exciting cause, [illegible] lemic cerebro-spinal meningitis. 9. [illegible] of Bright's disease of the kidne [illegible] treatment of cystitis.

THEORY AND PRACTICE OF MEDICINE (ECLECTIC).

1. Give diagnosis, complications and sequela of scarlatina. 2. Give etiology, pathology and treatment of pericarditis. 3. Give treatment of a child 2 years old who has taken one-half grain morphia sulphas. 4. Give treatment of chronic tonsillitis and adenoids of the pharynx. 5. Give etiology, diagnosis and treatment of Addison's disease. 6. Give treatment for la grippe. 7. Give causes and treatment for chorea. 8. How would you treat a case of arsenical poisoning? 9. Give pathology and diagnosis of mitral stenosis. 10. Give cause and treatment for uremic poisoning.

THEORY AND PRACTICE OF MEDICINE (HOMEOPATHIC).

1. Define Hodgkin's disease. 2. Give diagnosis and morbid anatomy of diabetes mellitus. 3. Give etiology and diagnosis of nephritis. 4. (*a*) What is an aneurism? (*b*) Give the physical signs of aneurism of the aorta. 5. Give symptoms and treatment of arteriosclerosis. 6. Define and give treatment of enuresis. 7. State common cause and treatment of endocarditis. 8. Define hydro- and pneumo-thorax. 9. Describe chronic interstitial pneumonia. 10. Give cause and morbid anatomy of cirrhosis of the liver.

CHEMISTRY.

1. What is the usual reaction of normal urine, and to what is it due? 2. Give two reliable tests for albuminuria. . Give the antidotes for carbolic acid poison. 4. What elements are found in all animal and vegetable substances? 5. What is the chemical antidote for arsenical poison? 6. If you were called to see a patient who had taken a large dose of tincture of iodin what chemical antidote would you give? 7. What is an oxidizing agent? Name three. 8. What is a reducing agent? Name two. 9. What is urea chemically? What is the average daily amount excreted in the urine? 10. Define a ptomain.

SURGERY.

1. Classify dislocation of the hip joint. 2. Give the indications for surgical intervention in gastric ulcer. 3. Give differential diagnosis between a sarcoma and gumma of the testicle. 4. Give the signs and symptoms of a fracture of the shaft of a long bone. 5. Differentiate between obstruction to the common bile duct by a gallstone and by a carcinoma of the head of the pancreas. 6. Give method of reduction of subcoracoid dislocation of the shoulder joint. 7. Give indications for trephining in fractures of the skull. 8. Give differential diagnosis between mechanical ileus and acute general peritonitis. 9. Briefly describe the treatment of strangulated hernia. 10. Give the immediate treatment for acute retention of urine from an enlarged prostate.

PATHOLOGY.

1. Describe the macroscopic and microscopic appearance of the kidney in interstitial nephritis. 2. Describe an aneurism. What condition is essential for the development of an aneurism? 3. Define (*a*) telangiectasis, (*b*) edema, (*c*) necrosis, (*d*) gangrene. 4. What is the pathology of locomotor ataxia? 5. Describe three kinds of crystals found in the urine. Under what conditions are these present?

BACTERIOLOGY.

1. How would you pasteurize milk? Why is the process repeated three times? 2. Give a method of differentiation between the tubercle and smegma bacilli. 3. How would you thoroughly disinfect your hands? 4. How would you test the blood for Widal's reaction? 5. How is it conclusively demonstrated that a certain microbe is the cause of a certain disease?

HYGIENE.

1. Define hygiene. 2. What hygienic measures are most efficient in the prevention and treatment of pulmonary tuberculosis.? 3. What hygienic measures are essential to the prevention of typhoid fever? 4. What hygienic measures are essential to the prevention of gastrointestinal catarrh in children? 5. Describe the proper hygiene of the sick room?

HISTOLOGY.

1. Define histology. 2. Give histology of muscle. 3. Give histology of an artery. 4. Give histology of the skin. 5. Give histology of a pulmonary air cell.

RHINOLOGY.

1. What are the causes of fetid discharge from the nose? 2. Name the congenital deformities of the nose? 3. Mention the forms of rhinitis. 4. Give the treatment of epistaxis. 5. Give the treatment of acute coryza.

MEDICAL JURISPRUDENCE.

1. How would you distinguish between an incised wound made before and after death? 2. Define (*a*) expert witness, (*b*) ordinary witness. 3. Define rigor mortis. To what is it due? 4. What organ is generally the first to undergo putrefaction? 5. What organ is generally the last to undergo putrefaction?

OPHTHALMOLOGY.

1. How would you test acuteness of vision? 2. Give test for color blindness. 3. Define conjunctivitis neonatorum; give causes, symptoms and treatment. 4. Define iridectomy, and state under what conditions you consider the operation necessary. 5. When should enucleation be performed? Describe operation.

OTOLOGY.

1. Give topography of the sound-conducting apparatus. 2. Give method of examination of the middle ear. 3. Give etiology, diagnosis and treatment of mycosis of the external ear. 4. Give diagnosis and treatment of strictures of eustachian tube. 5. Otosclerosis—give etiology, diagnosis and treatment.

LARYNGOLOGY.

1. Give the physiology of the larynx. 2. Give the differential diagnosis of syphilitic laryngitis. 3. Give symptoms and treatment of elongated uvula. 4. Give treatment of neoplasms, of the cavity of larynx. 5. Describe edema of the larynx and give proper treatment.

DERMATOLOGY.

1. Define tinea favosa; give synonym and treatment. 2. Describe scabies and give treatment. 3. What is epithelioma? 4. Give diagnosis of lupus erythematosus. 5. Give the etiology of lichen ruber.

Maine Report.—Dr. A. P. K. Meserve, secretary of the Maine Board of Registration of Medicine, reports that at the examination held at Portland, July 8 and 9, the number of subjects examined in was 14; total questions, 106; percentage required to pass, 75; 48 applicants were examined, all of whom passed. There was also one licensed by reciprocity with New Jersey, without examination. The examination was partly oral and partly written.

PASSED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
515	R.	Medical School of Maine...........	1903	89.3
521	R.	Medical School of Maine...........	1903	88 5-7
522	R.	Medical School of Maine...........	1903	82 5-7
523	R.	Medical School of Maine...........	1903	84
525	R.	Medical School of Maine...........	1903	87 1-7
526	R.	Medical School of Maine...........	1903	92 5-7
527	R.	Medical School of Maine...........	1903	87
530	R.	Medical School of Maine...........	1903	89.8
535	R.	Medical School of Maine...........	1903	89.5
536	R.	Medical School of Maine...........	1903	88.6
539	R.	Medical School of Maine...........	1903	95 6-7
543	R.	Medical School of Maine...........	1903	88 6-7
545	R.	Medical School of Maine...........	1903	89 4-7
547	R.	Medical School of Maine...........	1903	91
549	R.	Medical School of Maine...........	1903	92 6-7
552	R.	Medical School of Maine...........	1903	93.6
554	R.	Medical School of Maine...........	1903	93 1-7
555	R.	Medical School of Maine...........	1903	90 1-7
558	R.	Medical School of Maine...........	1903	94 5-7
559	R.	Medical School of Maine...........	1903	96 1-7
516	R.	McGill University, Montreal........	1903	87.2
538	R.	McGill University, Montreal........	1901	87 5-7
551	R.	McGill University, Montreal........	1902	93 2-7
517	R.	Coll. of Phys. and Surgs., New York	1886	90 1-7
533	R.	Coll. of Phys. and Surgs., Baltimore.	1903	87 5-7
557	R.	College of Phys. and Surgs., Boston.	1902	77
561	R.	College of Phys. and Surgs., Boston.	1903	86 2-7
518	R.	Bellevue Hosp. Med. Coll., New York	1897	94 4-7
519	R.	Medical Dept., University of Vermont	1888	86 2-7
520	R.	Harvard University Medical School..	1877	86.6
528	R.	Harvard University Medical School..	1901	92 5-7
542	R.	Harvard University Medical School..	1902	97
548	R.	Harvard University Medical School..	1899	91 3-7
550	R.	Harvard University Medical School..	1903	90
524	R.	Laval University, Montreal.........	1902	86 6-7
...	R.	Laval Universit [illegible]	1901	*
539	R.	Jefferson Med.	1902	87 1-2
556	R.	Jefferson Med.	1902	90.7
532	R.	Maryland Medical College, Baltimore	1903	90 6-7
537	R.	Maryland Medical College, Baltimore	1903	78.5
534	R.	Baltimore Medical College..........	1903	93.9
553	R.	Baltimore Medical College..........	1902	83
544	R.	Baltimore Univ. School of Medicine..	1903	83 6-7
540	R.	Vanderbilt University, Tennessee....	1903	80
541	R.	Johns Hopkins Med. Coll., Baltimore	1903	94 6-7
546	R.	Dartmouth Medical School.........	1888	75
560	R.	Univ. of the South, Sewanee, Tenn..	1901	89.5
529	H.	Hahnemann Med. Coll., Philadelphia	1892	86 6-7

* Oral examination only.

Wisconsin Report.—Dr. Filip A. Forsbeck, Milwaukee, secretary of the Wisconsin Board of Medical Examiners, reports the examination held at Madison, July 14 to 16, as follows: Subjects, 18; total questions, 110; percentage required to pass, 75, and not below 60 per cent. in more than one branch; written examination; total number examined, 53; passed, 43; failed, 10.

PASSED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
225	R.	Detroit College of Medicine..........	1903	87.3
226	R.	U. of Bishops' College, Montreal......	1903	82.7
227	R.	University of Minnesota............	1903	87.1
270	R.	University of Minnesota............	1902	82.6
228	R.	Coll. of P. and S., Univ. of Illinois..	1903	84.4
231	R.	Coll. of P. and S., Univ. of Illinois..	1903	80.8
232	R.	Coll. of P. and S., Univ. of Illinois..	1903	89.1
233	R.	Coll. of P. and S., Univ. of Illinois..	1903	84
234	R.	Coll. of P. and S., Univ. of Illinois..	1903	90.1
244	R.	Coll. of P. and S., Univ. of Illinois..	1903	90.7
253	R.	Coll. of P. and S., Univ. of Illinois..	1903	84
258	R.	Coll. of P. and S., Univ. of Illinois..	1903	83.8
259	R.	Coll. of P. and S., Univ. of Illinois..	1902	81.7
263	R.	Coll. of P. and S., Univ. of Illinois..	1903	89.2
265	R.	Coll. of P. and S., Univ. of Illinois..	1903	89.2
269	R.	Coll. of P. and S., Univ. of Illinois..	1903	87
230	E.	Bennett Medical College, Chicago.....	1902	80.3
235	R.	Rush Medical College...............	1903	76.3
236	R.	Rush Medical College...............	1903	85.7

PASSED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
237	R.	Rush Medical College	1893	89.5
245	R.	Rush Medical College	1903	87.5
246	R.	Rush Medical College	1903	87.6
247	R.	Rush Medical College	1903	84
249	R.	Rush Medical College	1903	85
250	R.	Rush Medical College	1903	87.6
272	R.	Rush Medical College	1903	79.9
273	R.	Rush Medical College	1903	84.9
274	R.	Rush Medical College	1903	85.6
238	R.	Jefferson Medical College	1902	78.1
262	R.	Jefferson Medical College	1903	88.4
239	R.	Johns Hopkins Medical School	1903	91.9
240	R.	Johns Hopkins Medical School	1903	92
241	R.	Northwestern Univ. Medical School	1902	92.2
248	R.	Northwestern Univ. Medical School	1903	92.3
251	R.	Northwestern Univ. Medical School	1903	85.5
252	R.	Northwestern Univ. Medical School	1903	86.2
266	R.	Northwestern Univ. Medical School	1903	86.6
268	R.	Northwestern Univ. Medical School	1903	75
243	H.	Hering Medical College	1903	85.7
256	O.	American School of Osteopathy	1903	83.5
257	O.	American School of Osteopathy	1903	83.2
267	H.	Chicago Homeopathic Medical College	1903	79.5
279	R.	Chicago Medical College	1877	75

FAILED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
229	E.	Bennett Medical College	1903	*78.2
242	H.	Hahnemann Medical College, Chicago.	1903	72
260	O.	Still College of Osteopathy	1903	*77.4
261	O.	Still College of Osteopathy	1903	72.1
277	O.	Still College of Osteopathy	1903	66
278	O.	Still College of Osteopathy	1903	63.2
264	R.	Northwestern Univ. Medical School	1903	75.9
276	R.	Detroit College of Medicine	1903	67.5
255	R.	Harvey Medical College	1901	58
271	R.	Illinois Medical College	1902	70.3

* Conditioned.

Indiana Report.—The Indiana Board of Medical Registration and Examination reports the examination held at Indianapolis, July 14 to 16, 1903, as follows: Number of subjects examined in, 18; total number of questions, 130; percentage required to pass, 75, and not less than 40 per cent. in any branch and not less than 50 per cent. in two subjects; written examination; total number examined, 106; number passed, 91; failed, 15.

PASSED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
56	R.	Hospital Coll. of Medicine, Louisville.	1903	85
75	R.	Hospital Coll. of Medicine, Louisville.	1903	78.1
77	R.	Hospital College of Med., Louisville..	1903	77.8
78	R.	Hospital College of Med., Louisville..	1903	89.1
80	R.	Hospital College of Med., Louisville..	1903	87.3
81	R.	Hospital College of Med., Louisville..	1903	86.3
92	R.	Hospital College of Med., Louisville..	1903	87.2
93	R.	Hospital College of Med., Louisville..	1903	85.3
57	R.	Coll. of Phys. and Surgs., Baltimore..	1892	81
68	R.	College of Phys. and Surgs., Chicago..	1902	89.4
72	R.	College of Phys. and Surgs., Chicago..	1903	86
73	R.	College of Phys. and Surgs., Chicago..	1903	85.6
152	R.	College of Phys. and Surgs., Chicago.	1903	84.9
91	R.	College of Phys. and Surgs., St. Louis	1903	82.4
104	R.	College of Phys. and Surgs., St. Louis	1903	85.3
160	R.	College of Phys. and Surgs., Keokuk..	1885	†76.4
58	R.	Louisville Medical College	1903	81.6
113	R.	Louisville Medical College	1903	86.1
114	R.	Louisville Medical College	1903	80.7
116	R.	Rush Medical College	1880	78.1
123	R.	Rush Medical College	1903	93.4
126	R.	Rush Medical College	1903	89.9
129	R.	Rush Medical College	1903	90
130	R.	Rush Medical College	1903	91.7
135	R.	Rush Medical College	1903	97.5
136	R.	Rush Medical College	1899	94
61	R.	Medical College of Ohio, Cincinnati...	1903	86.3
62	R.	Medical College of Ohio, Cincinnati...	1903	88.3
70	R.	Medical College of Ohio, Cincinnati..	1903	80.3
120	R.	Medical College of Ohio, Cincinnati..	1902	76.7
150	R.	Medical College of Ohio, Cincinnati..	1903	81.6
131	R.	Medical College of Indiana	1903	78.5
133	R.	Medical College of Indiana	1903	85
134	R.	Medical College of Indiana	1903	83
63	R.	Washington University, St. Louis....	1901	87.2
64	R.	University and Bellevue Hospital Medical College, New York	1903	87
74	R.	University of Kentucky	1903	85.6
85	R.	University of Kentucky	1903	80.8
88	R.	University of Kentucky	1903	82.7
89	R.	University of Kentucky	1903	89.7
140	R.	University of Kentucky	1903	80.6
145	R.	University of Louisville	1903	83.6
146	R.	University of Louisville	1903	87.3
147	R.	University of Louisville	1903	83.7
65	H.	Dunham Medical College, Chicago....	1901	85.4
66	H.	Chicago Homeopathic Medical College	1894	84.8
69	R.	Long Island College Hospital	1888	91.5
71	R.	Kentucky School of Medicine	1903	82.1
97	R.	Kentucky School of Medicine	1903	86.4
98	R.	Kentucky School of Medicine	1903	83.2
99	R.	Kentucky School of Medicine	1903	84.8
100	R.	Kentucky School of Medicine	1903	86.2
101	R.	Kentucky School of Medicine	1903	87.8
102	R.	Kentucky School of Medicine	1903	82
105	R.	Kentucky School of Medicine	1903	80.7
108	R.	Kentucky School of Medicine	1903	86.1
112	R.	Kentucky School of Medicine	1903	82.3
141	R.	Kentucky School of Medicine	1903	85
76	H.	Hering Medical College, Chicago	1903	80.5
82	E.	Eclectic Medical Institute, Cincinnati	1903	80.7
83	E.	Eclectic Medical Institute, Cincinnati	1903	84.5
154	E.	Eclectic Medical Institute, Cincinnati	1903	82.8
155	E.	Eclectic Medical Institute, Cincinnati	1903	84.7
90	R.	Miami Medical College	1903	76.6
94	H.	Homeo. Med. Coll. of Mo., St. Louis..	1903	80.8
95	H.	Homeo. Med. Coll. of Mo., St. Louis..	1903	82.7
96	R.	Jefferson Medical College	1902	86.1
153	R.	Jefferson Medical College	1903	87.1
156	R.	Jefferson Medical College	1903	87.5
107	R.	Barnes Medical College	1903	83.5
111	R.	Grand Rapids Medical College	1903	89.2
118	R.	Harvey Medical College	1903	85.6
119	O.	American School of Osteo., Kirksville.	1903	77
122	R.	Laura Memorial Med. Coll., Cincinnati	1902	84.5
124	H.	Cleveland Univ. of Med. and Surg...	1897	89.6
125	H.	Hahnemann Medical College, Chicago.	1903	87.6
144	H.	Hahnemann Med. Coll., Philadelphia.	1903	87.3
127	R.	Baltimore Medical College	1903	86.9
128	R.	Baltimore Medical College	1903	88
132	R.	Ohio Medical University, Columbus..	1903	81.6
161	R.	Ohio Medical University	1897	†77.4
137	H.	Pulte Medical College	1888	79.4
138	R.	Columbian Univ., Washington, D. C..	1901	86.6
139	R.	University Med. College, Kansas City.	1903	82.5
142	E.	Bennett Medical College, Chicago....	1903	91.2
143	E.	Bennett Medical College, Chicago....	1903	89.2
148	R.	Tulane University, New Orleans	1903	88.5
149	R.	Detroit College of Medicine	1893	83.7
151	R.	Marion-Sims-Beaumont Medical College, St. Louis	1903	76.9
157	R.	Medico Chirurgical Coll., Philadelphia	1902	84
159	R.	Cincinnati College of Med. and Surgery	1890	‡75.4

FAILED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
59	E.	American College of Medicine, Chicago	1903	*
60	R.	College of Phys. and Surgs., Keokuk..	1887	*
67	O.	Central Institute, Chicago	1903	*
79	R.	Central Coll of P. and S., Indianapolis	1903	79.3
84	R.	Kentucky School of Med., Louisville..	1902	†77.6
110	R.	Kentucky School of Med., Louisville..	1902	†76
158	R.	Kentucky School of Med., Louisville..	1901	†74.6
86	E.	Eclectic Medical Institute, Cincinnati.	1903	74.2
87	E.	Eclectic Medical Institute, Cincinnati.	1903	76.5
103	E.	Eclectic Medical College, Indianapolis	1903	72
106	R.	Columbus Medical College	1882	63.6
109	R.	Louisville Medical College	1903	73
115	R.	Louisville Medical College	1901	†75.9
117	R.	University of Louisville	1903	73.5
121	O.	Am. School of Osteopathy, Kirksville.	1902	72.4

Explanations.—O. Osteopath. * Did not complete examination. † Second examination. ‡ Third examination.

Marriages.

S. Wilson Dodge, M.D., mayor of Fairbury, Neb., to Miss Giles.

Henry W. Walker, M.D., to Miss Claire Johnson of Macon, Ga., August 19.

Charles C. Conser, M.D., to Miss Emily L. Baker, both of Baltimore, August 20.

Emma L. Scholz, M.D., to F. H. Aldrich, M.D., both of Belview, Minn., at Waukegan, Ill., August 18.

Richard Arnett Williams, M.D., Knoxville, Tenn., to Miss Cora Ella Morgan of Memphis, Tenn., August 25.

Joseph V. Longfellow, M.D., Urbana, Ohio, to Mrs. Vilette Ward Hopkins of Rawlins, Wyo., at Cincinnati, August 24.

Deaths.

Phenett Coe Barker, M.D. College of Physicians and Surgeons, New York, 1860, ex-president of the Medical Society of the State of New Jersey, and of the Morristown (N. J.) Board of Health; founder and medical director of the Morristown Memorial Hospital and dean of the local medical profession, died at his home, August 21, from angina pectoris, after an illness of two days, aged 68.

John Hyde, M.D. Hahnemann Medical College, Philadelphia, 1840, formerly a member of the Texas Rangers and a surgeon in both the Mexican and Civil wars, died from "senile debility," after an illness of two years, August 20, at his home in Terre Haute, Ind., aged 77. He retired from active practice about twenty years ago.

William A. Boyce, M.D. Medical College of Virginia, Richmond, 1903, of Kelford, N. C., died at the Protestant Hospital, Norfolk, Va., at which he was an interne, August 5, after an illness of one week, from septicemia due to infection of a thumb while dressing a wound, aged 25.

Charles F. Hildreth, M.D. Harvard University Medical School, Boston, formerly surgeon at the New Hampshire State Prison, Concord, and surgeon both in the Army and Navy during the Civil War, died at Manchester, N. H., August 18, from diabetes, aged 71.

Horatio F. Mintern, M.D. Arkansas University, Little Rock, 1899, a member of the Arkansas Medical Society, and the Little Rock Medical Society, died at his home in Pendleton, Ark., August 15, from malaria fever, after an illness of several weeks.

Ira Ellis Caspar Wister Smith, M.D. Atlanta (Ga.) Medical College, 1866, died at his home in Palmetto, Ga., August 17, after an illness of several months, aged 61. He represented his county in the state legislature for several terms.

Allen R. Thompson, M.D. Albany (N. Y.) Medical College, 1899, of Troy, N. Y., while suffering from melancholia due to a long illness, committed suicide by cutting his throat at Edgemere Inn, Asbury Park, N. J., August 22, aged 48.

Jonas Deisinger, M.D. University of Pennsylvania, Philadelphia, 1867, died at his home in York, Pa., August 13, from cancer of the face, after an illness of six years, aged 70. He was a member of the York County Medical Society.

Albert H. Brown, M.D. Jefferson Medical College, Philadelphia, 1903, interne at the Home Hospital, Augusta, Me., died at the City Hospital, Augusta, August 13, from tubercular meningitis, after an illness of two weeks, aged 23.

John M. Evans, M.D. Indiana Medical College, La Porte, Ind., 1846, founder and first mayor of Evansville, Wis., and at one time a member of the state legislature, died at his home in Evansville, August 23, aged 83.

Ephraim Bateman, M.D. Jefferson Medical College, Philadelphia, 1851, the oldest physician in Cumberland County, died at his home in Cedarville, N. J., August 20, from paralysis, after a long illness, aged 73.

Newton C. Harris, M.D. Albany (N. Y.) Medical College, 1857, assistant surgeon in the 155th New York Volunteer Infantry in the Civil War, died at his home in Schuylerville, N. Y., August 6, aged 70.

Samuel W. Skinner, M.D. Yale University, New Haven, Conn., 1846, surgeon and breveted colonel for meritorious service during the Civil War, died at his home in Toledo, Ohio, August 16, aged 83.

Washington West, M.D. McDowell Medical College, St. Louis, 1866, for two years a surgeon in the Navy, and afterward a resident of St. Louis, died from apoplexy after an illness of six days, aged 73.

Richard E. Brown, M.D. Jefferson Medical College, Philadelphia, 1863, a surgeon in the Army during the Civil War, died at his home in Mount Holly, N. J., August 7, from heart disease, aged 63.

Michael F. McGrath, M.D. College of Physicians and Surgeons, New York, died from consumption at the home of his brother in Fishkill Landing, N. Y., August 11, after a long illness, aged 35.

Stephen W. Seaman, M.D. Medico-Chirurgical College of Philadelphia, 1899, died at his home in Lenhartsville, Pa., August 11, from peritonitis, after an illness of one week, aged 28.

Emma Virginia Morton Baker, M.D. Woman's Medical College, Philadelphia, for ten years assistant physician at the Maine Insane Hospital, Augusta, died recently from paralysis, aged 50.

John Gleises, M.D. Bellevue Hospital Medical College, New York, 1877, of New York City, died at his summer home Brookside, near Saratoga, from "dropsy," August 14, aged 50.

J. A. Lovett, M.D. Central College of Physicians and Surgeons, Indianapolis, 1880, died from tuberculosis at his home in Goodland, Ind., after a lingering illness, August 4, aged 64.

Nathaniel L. Bunce, M.D. Cleveland Medical College, 1851, a pioneer practitioner of Marshalltown, Iowa, died at the home of his niece in Los Angeles, Cal., August 11, aged 74.

James Curry Ford, M.D. University of Louisville, 1878, died at his home in New York City from cancer of the throat, August 22, after an illness of nine months, aged 68.

John Henry Martin, M.D. University of Maryland, Baltimore, 1862, who practiced in Baltimore until a year ago, died at his home near Aberdeen, Md., August 20, aged 69.

John Irwin Arrington, M.D. University of Nashville, Tenn., 1863, died at his home in Nashville, August 19, aged 69. He retired from active practice two years ago.

Samuel O. Bryan, M.D. Louisville Medical College, died at his home near Mooleyville, Ky., August 2, from typhoid fever, after an illness of two weeks, aged 44.

Benjamin H. Howlett, M.D. College of Physicians and Surgeons, Baltimore, 1878, died at his home in Brogueville, Pa., August 14, after a long illness, aged 56.

William Z. Morgan, M.D. Kentucky School of Medicine, Louisville, 1892, died at his home in Princeton, Ky., August 17, from paralysis, after a long illness.

William P. Sharkey, M.D. Hahnemann Medical College, Philadelphia, 1875, died suddenly from heart disease at his home in Philadelphia, August 18, aged 62.

William H. Jett, M.D. University of Louisville, 1862, surgeon in the Federal Army, died suddenly at his home in Munfordville, Ky., August 17, aged 66.

P. W. Fox, M.D. Tennessee Medical College, Knoxville, 1895, died at his home near Beaver Ridge, Tenn., August 18, after an operation for appendicitis.

Hartwell C. Tompkins, M.D. University of Vermont, Burlington, died at his home in Knowlesville, N. Y., August 5, after a short illness, aged 75.

Thomas L. Phillips, M.D. Georgia College of Eclectic Medicine and Surgery, 1891, formerly of Atlanta, Ga., died at Springfield, Utah, August 13.

C. W. Miles, M.D. Bolingbroke, Ga., died at the home of his father in Griffin, Ga., August 15, from typhoid fever, after an illness of five weeks, aged 24.

James McGarry, M.D. McGill University, Montreal, 1858, died at his home in Niagara Falls, South, Ont., August 13, from gangrene of the leg, aged 69.

Richard C. Johnson, M.D. University of Louisville, 1884, died at his home in Morganfield, Ky., July 28, from dysentery, after an illness of ten days.

John W. St. Clair, M.D. Miami Medical College, Cincinnati, died at his home in Milton, Ind., August 13, after several months' illness, aged 61.

Charles E. Pierce, M.D. Eclectic Medical Institute, Cincinnati, 1878, died suddenly from heart disease at his home in Little Rock, August 19.

James E. Brown, M.D. Memphis (Tenn.) Medical College, 1858, died at his home in McKenzie, Tenn., August 13, from heart disease, aged 68.

George Ewing Connell, M.D. Howard University, Washington, D. C., 1879, died at his home in Irwin, Va., July 28, after a long illness, aged about 60.

Furman W. Runyan, M.D. Atlanta Medical College, 1887, died at his home in Austell, Ga., August 12, from uremia, after a short illness.

William H. Poindexter, M.D. University of Nashville, 1860, died from paralysis at his home in Bells, Tenn., August 17, after a long illness.

Arthur R. Barry, M.D. University of Georgetown, Washington, D. C., 1861, died at his home in Weatherford, Texas, August 4, aged 64.

Ernst Roesel, M.D. Missouri Medical College, St. Louis, 1887, died suddenly from heart disease at his home in Pequot, Minn., August 5.

Charles F. Baker, M.D., of Rawson, Ohio, died at his home in that place, July 26, from tuberculosis, after a long illness, aged 35.

John Harrington Vandiver, Jefferson Medical College, Philadelphia, 1845, died at his home in Talladega, Ala., August 17, aged 86.

John Denison Kenyon, M.D. Albany (N. Y.) Medical College, 1857, died suddenly at his home in Westerly, R. I., August 12, aged 69.

J. N. Barnett, M.D. University of Louisiana, New Orleans, 1857, died at his home in Little Rock, Ark., August 14, aged 69.

John Hursey Pool, M.D. University of Pennsylvania, Philadelphia, 1859, died at his home in South Mills, N. C., July 29.

Humphrey G. Hendrick, M.D., of Talladega, Ala., died at the home of his brother in Eureka, Ala., August 11, aged 78.

Robert J. Dearborn, M.D. College of Physicians and Surgeons, Chicago, died at his home in Morrisonville, late in July.

Andrew J. Hartman, M.D. University of Louisville, 1881, died at his home in Myers, Tenn., August 4, aged 55.

Mary K. Gale Warren, M.D. Boston University School of Medicine, 1877, died at her home in Boston, July 31.

August Trafton, M.D., 1876, died at his home in Dixon, Cal., August 15, after an illness of six weeks, aged 78.

Gotthold Pape, M.D. New York University, 1880, died, August 1, at his home in Hoboken, N. J., aged 61.

George T. Cauthorn, M.D., died at his home in Bedford City, Va., August 8, after a long period of invalidism.

Deaths Abroad.

Emma Constance Stone-Jones, L.S.A. London 1889; M.B., C.M., Trinity College, Toronto, died recently at Melbourne, Victoria, Australia, aged 46. She is said to have been the first qualified woman practitioner in Australasia.

Dr. Karl Hofmann, professor of physiology and anatomy at Leyden, aged 62.——**Dr. Ladreit de Lacharriere** of Paris, founder of the *Annales des maladies de l'oreille et du larynx*, and honorary chief of the National Institute for Deaf Mutes.——**Dr. Chalot**, professor of surgery at Toulouse.——**Dr. Jean Roger**, inspector general of the conseil sanitaire maritime et quarantenaire in Egypt.

Carl Maydl, M.D., professor of surgery at Prague, died at his country seat, August 12, from the effects of heart disease, aged 50. Maydl commenced his career as assistant to E. Albert and accompanied the latter from Innsbruck to Vienna. His monographs on subphrenic abscesses and jejunostomy are now classics, and he succeeded in accomplishing what John Simon and Thiersch had only partially realized, that is, a permanent communication between the bladder and rectum in cases of exstrophy of the bladder. He had been long at work on a Manual of Special Surgery, and the first part has been published.

Miscellany.

THE ST. LOUIS EXPOSITION.

Plans for the Elaborate Pathologic Exhibit—Hospitals to Show Details of Their Operation.

THE HOSPITAL EXHIBIT.

The hospital exhibit of the St. Louis Exposition, 1904, is to be in the department of social economy, under the section of charities and correction. This exhibit will be displayed in the Palace of Education and Social Economy, which has a very prominent location.

Here are to be shown models of grounds and buildings, architectural drawings, photographs, charts and statistics relating to the hospital and its management. The exhibit is divided into the following subjects for elaboration by different hospitals, dispensaries, nursing schools, etc.:

1. Classification of disease.
2. Cause of disease.
3. Prevention of disease.
4. Relation of disease to crime and pauperism.
5. Evolution of the doctor.
6. Gallery of eminent physicians and surgeons.
7. Relief on the battlefield.
8. Evolution of general hospital.
9. Architecture of general hospital.
10. Model operating room.
11. Sterilizing, anesthetizing and drug rooms.
12. Diet kitchen.
13. Clinical laboratory.
14. Pathologic laboratory.
15. Pathologic exhibit (a scientific medical exhibit).
16. Display of medical instruments.
17. Ambulances.
18. Ambulance adjuncts.
19. Emergency hospitals.
20. Infectious hospitals.
21. Hospitals for consumptives.
22. Hospitals for deformities (instruments and appliances).
23. Ear and eye infirmaries.
24. Maternity hospitals
25. Hospitals or wards for the care and treatment of inebriates.
26. Hospitals for the treatment of morphin, tobacco and other such habits.
27. Other special hospitals.
28. Leper colonies.
29. Hospital construction.
30. Sanitariums.
31. Medical aid by missionaries.
32. Dispensaries.
33. The evolution of the nurse.
34. Gallery of famous nurses.
35. The visiting nurse.
36. Nurses' handiwork.
37. Training schools for nurses.
38. Gallery of eminent philanthropists.

THE PATHOLOGIC EXHIBIT.

Some of the best pathologists and anatomists are preparing a scientific classification for a pathologic exhibit. As now contemplated diseases will be grouped according to organs. Each gross specimen (as lung, heart, brain, liver, etc.) will be duplicated by a normal anatomic specimen. Each pathologic specimen will be accompanied by a microscopic slide where possible, showing the micro-organism causative in the production of the disease. When dissection of the normal would elucidate the medical or surgical field, the same will be present, dissected properly and preserved and mounted in the most approved way. Models, photographs and statistics will accompany the pathologic specimens.

The department announces that the object of the pathologic exhibit is to indicate as succinctly as possible the rise, progress and present status of our knowledge of disease in man and the domestic animals. The choicest pathologic specimens from the various medical centers of the United States, when properly exhibited according to the final plans, will form an object lesson in this department of science never before seen in this country. The exhibit will represent the work of specialists in histology, embryology, bacteriology, physiology and dissection. To make the exhibit more effective and at the same time more utilitarian for the physician, library and reading-room facilities are to be found in connection with the same. To insure greater interest in diseased tissues and organs, a series of dissections illustrating many points in the normal anatomy of man and the domestic animals will help to complete the exhibit.

It is deemed wise to classify (1) in general; (2) in particular. In the former, organs irrespective of disease are grouped; in the latter, the organic classification is subordinate to diseased structures. As previously stated, according to the special classification, diseases or diseased parts regardless of organ or part of body in which found, characterize this classification, such as tumors, fractures, skin diseases, etc.

Exhibitors are not required to comply with every feature of the arrangement set forth under the general classification, although this is earnestly desired when circumstances permit. Where an exhibitor sends in, e g., a pneumonic lung only, the department will see to it that the other features, such as slides and normal anatomy, are properly cared for. Parties competing for prize dissections illustrating normal anatomy inform us of the region to be dissected.

To set forth the scheme of the general classification in its proper form let us illustrate the essential features by an analysis of one organ, as, e. g., the lung. In this department will be exhibited normal and diseased lungs arranged for study as follows:

1. Dissections showing normal human lungs.
2. Dissections showing normal domestic animals.
3. Microscopic slides, normal.
4. Pathologic specimens, gross.
5. Pathologic specimens, microscopic.
6. Cultures and culture processes.
7. Charts, devices and stereopticon views.
8. Books and reprints on anatomy, histology, bacteriology and pathology of pulmonary diseases.

Colleges, hospitals and individuals are asked to furnish approximate lists of the specimens which they will exhibit. Correspondence should be opened up at once with Alvin E. Pope, St. Louis, superintendent of the section on charities and correction.

Book Notices.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and Other Topics of Interest to Students and Practitioners by Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U. S. A., with the Collaboration of John B. Murphy, M.D., Chicago; Alexander D. Blackader, M.D., Montreal; H. C. Wood, M.D., Philadelphia; T. M. Rotch, M.D., Boston; E. Landolt, M.D., Paris; Thomas G. Morton, M.D., Philadelphia; James J. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh, and John Harold, M.D., London;

with Regular Correspondents in Montreal, London, Paris, Leipsic and Vienna. Volume II, Thirteenth Series. Cloth. Pp. 311. Price, $2.00. Philadelphia and London: J. B. Lippincott Company.

This work, properly a serial in book form, will be found full of practical instruction, like all the others of the series which we have seen. The subjects considered in the present volume are: "The Summer Diarrheas of Children, Disease of the Pancreas, Treatment, Practice of Medicine, Surgery, Pediatrics, Obstetrics and Gynecology, and Ophthalmology," and under each of these heads are valuable papers by well-known authors, among whom may be included Professors Conn of Middletown, Conn., Cotton, Deaver, Gay, Goffe, Bouchard and Landolt of Paris, and other names hardly less familiar. These are themselves sufficient assurance of the merits of the articles, and the work, taken as a whole, is a series of brief but valuable monographic papers on the subjects that it includes.

A MANUAL OF PRACTICAL ANATOMY. By the Late Prof. Alfred W. Hughes, M.B., M.C., Edin., F.R.C.S. Edin., F.R.C.S. Eng. Professor of Anatomy, King's College, London. Edited and Completed by Arthur Keith, M.D., Aberd.; F.R.C.S. Eng., Lecturer on Anatomy, London Hospital Medical College. In Three Parts. Part III. The Head, Neck and Central Nervous System. Illustrated by 12 colored plates and 204 figures in the text. Cloth. Pp. 387. Price, $3.00 net. Philadelphia: P. Blakiston's Son & Co. 1902.

The same general plan is carried out in Part III as in the foregoing parts. It contains 12 colored plates and 204 figures. A notable feature of this part is the repeated reference that is made to the surgical importance of many of the structures of the head, neck and central nervous system. The surface markings of the brain is dwelt on and given due consideration. The surgical anatomy of the head receives considerable attention, and the different regions from which the lymphatic glands receive their supply are mentioned. More attention is given than in ordinary books to the anatomy of the ear, and here again many references are made to surgical procedures. The description of the spinal cord is rather brief, but the brain receives the attention it deserves. In the dissection of the cranial nerves the author claims that it is more convenient to consider the last first and the first last, and he seems to carry out the plan to apparent advantage. Altogether the division of the subject of dissection into three different parts has many advantages which would be apparent to any student trying to work and at the same time care for a large unwieldy single volume.

SELECTED PAPERS ON OPERATIVE AND CLINICAL SURGERY. By the Late William Stokes, M.D., M. Ch. (Univ. Dub.); F.R.C.S.I.; Knt., Surgeon in Ordinary to Her Majesty Queen Victoria in Ireland. Edited by William Taylor, B.A., M.D. (Univ. Dub.), F.R.C.S.I., Surgeon to and Lecturer on Clinical and Operative Surgery, Meath Hospital and Co. Dublin Infirmary. With a Memoir of the Author by Alexander Ogston, M.D., Regius Professor of Surgery, University of Aberdeen. Cloth. Pp. 484. Price, 10 Shillings. London and Dublin. Bailliere, Tindall and Cox. 1902.

This work consists of a collection of the articles written during the past thirty-five years by the late Wm. Stokes, and edited by Wm. Taylor. All the articles have appeared elsewhere in the various medical journals at the time they were written, with the exception of the two South African papers added by Mr. Taylor. Most of the chapters are so old, some of them even antedating the antiseptic era, that they can have little more than a historic value. Collectively they illustrate fairly well the progress of surgery from early Listerism down to recent times.

MEDICAL JURISPRUDENCE. A Manual for Students and Practitioners. By Edwin Welles Dwight, M.D., Instructor in Legal Medicine, Harvard University. Series Edited by V. C. Pedersen, A.M., M.D., Instructor in Surgery and Assistant Anesthetist at the New York Polyclinic Medical School and Hospital. Cloth. Pp. 249. Philadelphia and New York: Lea Brothers & Co.

This little volume is intended only as a brief compendium of the facts in connection with legal medicine which every practicing physician ought to know. As such, and as a work for students, it is not exhaustive, but in the main it gives a very fair and reliable summary of the principal facts. A notable omission, however, is that of the biologic blood test, which certainly ought to be included in every work coming out in 1903. The part devoted to insanity is necessarily brief and hardly sufficiently complete for this day. Aside from these, and possible one or two other minor points, the book is one to be generally commended.

Association News.

REPORT ON THE SCIENTIFIC EXHIBIT

Of the American Medical Association, at New Orleans, May 5-8, 1903.

By Frank B. Wynn, A.M., M.D., Chairman.

The fourth Scientific Exhibit of the Association was most successfully consummated, despite obstacles which for a time threatened a favorable outcome. The remoteness of New Orleans from sources of material and a three-month period in which to accomplish the work, cast a gloom over those deeply interested in the continued success of the movement. Too much can not be said in praise of those who came nobly to the rescue at a critical time. On the roll of honor are twenty-eight persons who labored faithfully, without money and without price, for the common good of the profession and the success of the meeting. Among them are those distinguished both in the scientific and practical fields of medicine, as well as young men fired with enthusiasm for the higher ideals of the profession.

In a perusal of the subjoined report it will be noted that 16 well-known colleges, hospitals or public institutions are represented and 11 private collections. The analytical reader will observe as conspicuous features three research exhibits and the general tendency of contributors to the grouping of specimens in illumination of particular phases of pathology. This is in response to the gradually evolved policy of the committee.

Lack of efficient demonstration has long been recognized by those having the matter at heart as the weak point of the exhibit. Many specimens extremely valuable as practical object lessons, remain impotent on the shelves unless intelligently demonstrated. As long as five years ago the writer, in a letter to THE JOURNAL, strongly advocated systematic demonstration in connection with the presentation of state society exhibits. It is just as important for national collections if the greatest degree of instructive efficiency is to be attained. It was hoped in the outset that exhibitors would see to the demonstration of their own contributions. Few, however, have been able to give so much time. The plan has also been tried of attempting to secure a large demonstration corps of medical students and young physicians resident in the place of meeting, who should alternate in escorting small delegations of visitors about the exhibit. But it was found impossible to secure a sufficient number of competent men willing to give the necessary time. The solution of this perplexing problem has come naturally in the reduction of the size of the exhibit and its specialization. In this way demonstration becomes simplified and less laborious.

The particular phases of pathology or other scientific branch of medicine illuminated in the exhibit from year to year should be varied according to the topics prominently before the profession and likely to command conspicuous attention in the Section meetings. In consonance with the ideas expressed there were shown at New Orleans very complete series illustrative of the following: Anomalies and pathologic conditions of the heart; tuberculosis in the various organs and structures of the body; amebic dysentery with sequels and intestinal lesions of tuberculosis and typhoid for purposes of differentiation; malaria; fibroid tumors; ectopic gestation; surgical diseases of the kidney; pathologic conditions of the bladder and prostate gland; renal and vesical calculi; otologic and neurologic groups. Effort was made to have these series demonstrated before the interested sections in conjunction with related papers to be read. The idea met with warm reception on the part of Section officers generally, but crowded programs made its consummation difficult of accomplishment. For the coming meeting at Atlantic City, however, it may be definitely stated that demonstrations of particular series of the exhibit will be conducted by persons of distinction, scheduled for specific hours and days on the published program.

M'GILL UNIVERSITY: GEORGE ADAMI AND M. E. ABBOTT.

1. Ruptured Tubal Gestation, Third Week.—Age 26; two full-term children, last one being 4 years of age. Menstrual history: Began at 12; regular; scanty, only lasting one and one-half days. Complaints on admission: Sudden, severe pain in the lower abdomen and fainting on Dec. 1, 1902, lasting until operation on the third. Last regular period Nov. 15, 1902, but since then any exertion would cause flow. Nauseated two weeks and had two chills the day before operation. Pulse weak, thready, 168; respirations, 44, labored; temperature, 98 2/5. Operation Dec. 3, 1902. Abdominal cavity contained a large quantity of fluid blood. Recovery.

2. *Tubal Pregnancy. Rupture in Early Weeks.*—Aged 26. Last labor eight months previous. Last regular period June 13, 1900; menstrual flow from May 17 to June 3, with severe pains in abdomen, persisting until June 13, when they became very severe and collapse developed. Pulse, 115; respirations, 44. Abdominal section. Recovery.

3. *Ectopic Gestation.*—Specimen a five and a half months fetus, which had remained in the abdominal cavity seventeen years, having been killed by application of electricity. Fetus now represented by a mass bent on itself, the bones of vertebral column, ribs, one upper extremity and part of cranium still plainly made out. Patient aged 55. In 1885 right tube found to be seat of gestation of five and one half months. Gestation was checked by application of electricity. For eight years the patient was well, but for the past nine she has had recurring spasmodic pains, growing worse and worse. Abdominal section Dec. 13, 1902. Recovery.

4. *Fetus, Sac and Tube. Ectopic Gestation, Five and One-half Months.*—Patient aged 30. Complained on admission of epigastric pain, vomiting and weakness. Pulse, 160; respirations, 36; temperature, 98.8 F. Last menstruation Jan. 26, 1901. Usual signs and symptoms of pregnancy marked. During night of July 3 was seized with paroxysms of epigastric pain and vomiting, followed in some hours by a chill. On July 4 had three fainting spells. Pelvic examination revealed a soft cervix, to which was attached a firm globular mass. Neither ballotment nor rhythmic contractions could be felt. Operation July 4, 1901, revealed fetus floating in free blood in the abdominal cavity. Recovery.

5. *Tubal Pregnancy. Ruptured in Third Month.*—Enlarged uterus and appendages; the right tube enlarged to form tumor size of an orange; laid open to show placental tissue, fetus and cord *in situ*. Fetus apparently dead some time. Pelvic hematocele and septic peritonitis. Patient aged 32; amenorrhea and morning vomiting for three months; severe crampy abdominal pains, with bloody vaginal discharge for three weeks before death from septic peritonitis.

6-9. *Ruptured Tubal Pregnancies.*

10. *Section Through Pelvic Organs, Showing Multiple Fibromata Uteri, with Calcification.*

This beautiful exhibit was solicited as a special feature in illumination of ectopic gestation, which was one of the topics prominently considered by the Section on Obstetrics and Diseases of Women. It was the second contribution of McGill University to the Scientific Exhibit of the Association, and testifies most forcefully to the scientific spirit and friendly cooperation of our Canadian colleagues.

CINCINNATI HOSPITAL AND CINCINNATI ACADEMY OF MEDICINE: HORACE J. WHITACRE, ASSISTED BY J. C. BUTTEMILLER AND MARION WHITACRE.

In conformity with the suggestion of the committee the following contribution was arranged to illustrate chiefly one phase of surgical pathology, viz., surgical diseases of the kidney.

Nos. 11-78. Group I. Surgical Diseases of Kidney.—68 wet specimens, showing the following range of lesions: Contracted kidney; large white kidney; rupture of kidney (nephrectomy); cystic kidney (four varieties); pyelitis; hydronephrosis, from stone in ureter, from hypertrophy of prostate, from cancer of the vesical ends of both ureters, and from stricture of urethra; pyonephrosis (eight specimens); stone in pelvis of kidney (several varieties of stone); tubercular kidney; sarcoma of kidney; retroperitoneal sarcoma and carcinoma.

Especially beautiful in this group were two congenital cystic kidneys; also the series of tubercular kidneys. One specimen showed a definitely circumscribed tuberculous mass in one end of the organ; another great numbers of miliary tubercles; another multiple caseous foci varying in size from a pin-head to a large pea; a fourth was reduced to shell one centimeter thick; in a fifth the capsule formed a sac filled with caseous matter, but no demonstrable tubercular tissue; and a sixth constituted a tumor the size of a child's head.

Nos. 79-104. Group II. Calculi.—Removed from the pelvis of the kidney, from the middle of the ureter, from the vesical end of the ureter and from the bladder. Fifteen of these loaned by Joseph Ransohoff; others by J. C. Oliver, N. P. Dandridge and William Judkins.

The specimen of pyonephrosis with stone in the pelvis of the kidney presents some features of unusual interest. First a stone weighing six and one-half ounces was removed by operation; four weeks later the kidney was removed, as the patient did not improve. Later it was found that the kidney of the opposite side was totally destroyed and contained a large stone.

Nos. 105-110. Specimens of Ectopic Gestation.—Presented by Charles L. Bonifield and John Miller.

No. 111. Embolism of Left Coronary Artery.—This case occurred in the practice of Paul Millikin of Hamilton, Ohio. The patient, a young man, died with marked symptoms of angina pectoris. The necropsy revealed a ruptured chorda tendineæ protruding from the mouth of the vessel, while on the end within the artery was a small thrombotic mass completely occluding the vessel.

Not only from a pathologic standpoint was this collection most excellent and instructive, but in an artistic way as well. Most were Kaiserling preparations, mounted with great care. It was the third contribution from Cincinnati to the National Exhibit and constitutes a forceful example of the stimulating effect of the exhibit in awakening local interest in practical pathology. Three years ago the showing of Cincinnati at St. Paul was meager; at Saratoga decided improvement was noted; and the superb collection presented at New Orleans reflected great credit on the profession of Cincinnati, and gives proof of substantial progress in the field of practical pathology.

MEDICAL DEPARTMENT TULANE UNIVERSITY: O. L. POTHIER.

Nos. 112-219. Photographs.

This excellent array of photographs was designed to show more particularly the diseases prevalent in the colored race, such as keloid, leucoderma, elephantiasis, etc. One beautiful picture was of a most extensive case of pemphigus in the negro, followed by cure. Another photograph was of a case of pseudohermaphrodism, presenting a most interesting history. The individual was 45 years of age when admitted to the female wards of the Charity Hospital of New Orleans. He had always supposed himself a woman, and had always lived among women. It was by accident that the physician in charge discovered that the condition was simply hypospadias. The man refused to put on male clothing, and when transferred to the male wards took the first opportunity offered to run away.

No. 220. Double-Headed Monster.—A noteworthy specimen from a colored woman. She had traveled some distance from the country with one of the heads born. When admitted to the Charity Hospital the case was supposed to be one of twins which had become locked. As the first child (?) was dead, amputation of the head and shoulder was performed. Recognition of the monster came only with the birth of the other part. An examination of the monster revealed four lungs, two hearts, two stomachs, two duodenums for a distance of about an inch, after which they fused, and single intestine. There were two kidneys, one liver, one spleen, and the organs of reproduction single. The body showed two heads, two spinal columns, two spinal cords, fusion taking place at the sacrum, two arms and two legs.

No. 221. Elephantiasis of Penis.—The subject was a negro who presented no other evidence of the disease. The organ measured twelve inches in length and fourteen in circumference.

Nos. 222-235. Miscellaneous Gross Specimens.

The collection gave ample evidence of the richness of the field for the study of pathologic conditions more or less characteristic of the negro. New Orleans offers in the Charity Hospital a wealth of material which under the present efficient pathologic dissection will yield valuable results in the near future.

MEDICAL DEPARTMENT, UNIVERSITY OF TEXAS: W. S. CARTER.

Nos. 236-255. Apparatus.—Some twenty pieces for physiologic experimentation, largely constructed in the Harvard laboratories under Professor Porter, and partly devised in the laboratories of the University of Texas.

Nos. 256-315. Tracings.—Six books, very neatly made by students of the university and grouped as follows:

(*a*) Frog's heart and circulation: showing influence of cold and warm physiologic salt solution on heart beat.

Peculiarities of heart muscle: staircase contractions after first ligature of Stannius; latent and refractory periods; maximum contraction with minimum stimulus; separate contractions from tetanizing current, etc.

Innervation of heart: augmentation of heart beats from stimulation of sympathetic; stimulation of vagi and crescent normally and after application of nicotin; crossed action of muscarin and atropin on ganglia of heart, etc.

Blood pressure in aorta: effect of cardiac inhibition of reflex vasoconstriction by stimulating a sensory nerve and the fall of pressure from destroying spinal cord.

(*b*) Circulation in mammals: showing effect of bleeding and transfusion on blood pressure. Effect of chloroform and ether respectively on the circulation and respiration; influence of artificial respiration after respiration stops.

The effect of stimulating the great splanchnic in the dog before and after cutting the vagi; stimulation of the (*a*) central and (*b*) peripheral ends of the cut splanchnic.

Stimulation of the depressor nerve before and after section of the vagi (rabbit).

Effect of adrenal extract, of peptone, of cutting spinal cord high up, Traube-Hering curves, etc.

(*c*) Respiration: effect of inflation and collapse of the lung on respiratory activity; apnea; stimulating a sensory nerve; stimulating the trigeminus and superior laryngeal (causing inhibition); stimulation of the vagi with feeble and strong currents; effect of section of vagi on the frequency and depth of respiration, etc.

(*d*) Muscle and nerve experiments: showing myogram with drum at fast speed and tuning fork waves making hundredths of a second; extensibility and elastictiy of muscle; effect of heat and cold on myogram; heat rigor; effect of load on myogram; influence of veratria and suprarenal extract on muscle twitch; analysis of tetanus, showing tracings with 8, 16, 24, 40 and 50 stimuli per second; fatigue curves; electrotonus—effect of galvanic current on the irritability and conductivity of nerve, etc.

The foregoing is sufficient to acquaint the reader with the fact that physiology as taught at the State University of

Texas is abreast of the leading institutions of the country and keeping pace with the commercial progress of the "New South."

NORTHWESTERN UNIVERSITY MEDICAL SCHOOL: WINFIELD S. HALL.

No. 316. Frog-Board Myograph.—An inexpensive and convenient myograph, an improved ergograph, especially adapted to work in general physiology and pharmacology. Its advantages over other similar instruments are: 1. The muscle-nerve preparation can be made in at most one-fourth the time required for the classic preparation. 2. The muscle and nerve are not exposed to atmospheric changes. 3. The circulation of the tissues is not disturbed. This has the advantage (*a*) of permitting the study of the action of drugs on muscle tissue under normal conditions, (*b*) of studying fatigue without the accumulation of fatigue products under abnormal conditions.

No. 317. Manometer Tambour.—A modification of the classic manometer apparatus. A small tambour was joined to the distal end of the manometer by a piece of pressure tubing and supplied with a delicate tracing lever, capable of magnifying the movements of the membrane ten to twenty times, as desired. With the surface of the tambour not larger than 15 mm. and the mercury meniscus not less than 3 mm. in diameter, the most beautiful arterial pressure tracing can be obtained, showing not only the respiratory and percussion waves, but the dicrotic wave clearly superimposed on each cardiac wave.

(To be continued.)

Medical Organization.

MEDICAL ORGANIZATION METHODS AND BENEFITS.

J. N. M'CORMACK.

(Continued from page 569.)

HOW DISSENSIONS GROW.

His location chosen, say in a community where there are two physicians already, he is fortunate if he is not met at the threshold, the most sensitive and impressionable period of his life, with ill-concealed sneers, or complete ostracism by those already established in practice, which will grow if he succeeds, or rapidly disappear if he proves a failure. With time, and an arm's length acquaintance which can not be avoided entirely, he will probably learn that one or both of his professional neighbors practically dropped their studies at graduation; that they receive little or no new literature except the free copy advertising journals; that they have no proper equipment for the emergency surgery they must do, or pretend to do, while time was habitually given over to petty professional bickerings and contentions sufficient to have made both of them scholars of no mean attainments in medicine as well as in general knowledge, had it been utilized in single, or better still, in joint study. Although they constantly need each other's advice and help as no other men ever can do, he is likely to find that this spirit of envy and jealousy, pitched on a plane low almost beyond conception, not only deprive them of these, but so divides them and impresses the community as to greatly lessen the respect and confidence due both of these otherwise worthy men, as well as the great profession which they alone represent in that community. He will find that they often quarrel about diagnoses in which both were wrong; about patients who would not pay either of them, or about violations of the code which neither of them have read; that each is afraid to collect his hard-earned fees for fear the other will inherit some of his offended patrons; that ambition for excellence in surgery or other special work is dwarfed by the fact that one will send for consultation, or send his surgery, to a distant town or city rather than ask the assistance of his neighbor, and that even their families are so estranged as to be deprived of social relations and pleasures of which both are most deserving. In a word, our graduate is likely to find that this canker of envy and jealousy which clings to our otherwise noble profession with such tenacity, and blights and curses, and curses and blights, all to which it clings, not only bars or makes all advancement difficult, but so interferes with all the social and other interests and purposes of the profession as to destroy his ideals of life. Gradually the dominant bias of his college life begins to assert itself, and with no society influence to correct the evils, or even to furnish him the opportunity of learning that his competitors are well-meaning men personally, who were stunted and misshapen by the same process to which he is being subjected, our graduate, whose horizon was probably never large, but certainly susceptible of enlargement, will be in great danger of becoming the victim of his environments, and grow smaller and smaller with the years, until he becomes a physician only in name.

POVERTY AND OTHER ILLS CAUSED.

It is mainly this spirit and the resulting conditions which cause so much poverty in the profession, interfering with it in every business aspect, just as the loss of public respect and confidence directly traceable to it accounts for most of the difficulties in securing needed medical and health legislation and in enforcing such laws when enacted.

And this is no fancy sketch. Let him who doubts its fidelity to truth try to induce some physician of the same community, somewhere outside of the long organized sections, or the occasional nature's nobleman, as an exception to prove the rule, to speak in real kind and unstinted praise of each other. It has become such a custom for physicians to refer to each other in terms of detraction, or by damning with faint praise, that one is disappointed in going to a strange community not to hear it, and always, whether in the country between two physicians, or in the city between two factions, whether done with the clumsiness of the boor or the finish of the scholar, back of it may be seen the same hideous monster of personal envy and jealousy which has dominated our profession for ages like one of the demons of mythology.

That such glaring and hurtful evils should fasten themselves on a great, noble and really learned profession like ours, generation after generation, and make its dissensions a by-word and term of reproach in common speech and literature, has been difficult for many to understand. As men and citizens, its individual members will bear favorable comparison with any and all other classes. They do more for the poor, more actual Christian charity, every day in the year than all the churches, preachers, Christian Endeavors, Epworth Leagues and similar institutions combined. They can and do live in peace and amity with everybody in the community except each other.

REASONS FOR THESE CONDITIONS.

On investigation it will be found that this is a condition common to all unorganized vocations whose members lead segregated lives. It is a recognized fact in history that the inhabitants of islands are suspicious and sensitive. This seems to be equally true of most individuals who live apart from their fellows from any cause. Until the prevalence of the community-of-interests idea induced systematic organization, the rivalry between local bankers was proverbial, and until the day of ministerial associations, with the weekly meetings, and opportunity for acquaintance and agreement as to matters of policy and public concern, and at least decent and respectful tolerance as to essentials, the condition of the ministry was worse. Instances might be multiplied indicating each similar vocation. On the other hand, lawyers have always lived together in peace and plenty. This is not because they are better men, or that their profession is a broader one, but for the reason that in the ordinary pursuit of their calling they are brought into constant contact with each other, come to know each other, and, being worthy men in the main, mutual respect and tolerance for each other's faults and shortcomings grow up naturally and unconsciously. In addition, every term of court is a free training school, with a constant and almost ideal attrition of mind against mind. Those who do not study go to the rear and lose out. Those who do not polish off their angles get them knocked off. After the hard words and fierce conflicts, sometimes unavoidable when earnest men contend over serious and weighty matters, which physicians would treasure up and pout about for years, rolling and trolling them on the tongue as dainty morsels long after they were barred by every statute of limitation, being encouraged to do so by other kindred spirits and custom, lawyers or their professional friends usually effect an immediate reconciliation, go arm-in-arm to the nearest cafe to bury the chance enmity in a lunch, julep or cocktail, and are only the better friends for having tried each other's metal.

(To be continued.)

Harrison County (Miss.) Medical Society.

This society met at Biloxi, August 12, and perfected reorganization.

Delaware County (Ind.) Medical Society.

At a meeting held in Muncie, August 13, the society voted to reorganize under the plan recommended by the American Medical Association.

Leon County (Fla.) Medical Association.

This association was organized at Tallahassee, August 7, with the following officers: Dr. William E. Moor, president; Dr. Henry E. Palmer, vice-president, and Dr. C. M. Ansley, secretary, all of Tallahassee.

Yolo County (Cal.) Medical Society.

Pursuant to call of Dr. Walter E. Bates, Davisville, the physicians of Yolo County met at Woodland, August 13, and organized a county medical society, electing Dr. Walter E. Bates, Davisville, president, and Dr. Fairchild, secretary.

Boone County (Iowa) Medical Society.

Medical men of Boone County met at Boone, August 18, to organize a county medical society in affiliation with the state and National organizations. Dr. William L. Pollock, Boone, was made temporary chairman, and Dr. Myers, temporary secretary.

Codington County (S. Dak.) Medical Society.

On August 5, fourteen physicians met at Watertown and took the first steps toward the organization of a county medical society to be in affiliation with the state and National organizations. Permanent organization is to be effected September 15.

Orange County (Texas) Medical Association.

Dr. Benjamin F. Calhoun, Beaumont, councilor for the Southeast District, met the physicians of Orange County at Orange, August 4, and delivered an address on organization, after which the society was reorganized in conformity with the regulations of the state and National associations.

Hill County (Texas) Medical Association.

The Hill County Medical and Surgical Association met at Hillsboro, August 12, and reorganized as the Hill County Medical Association, in accordance with the requirements of the new state organization. The officers are Dr. George D. Bond, president, and Dr. J. M. Martin, secretary, both of Hillsboro.

Lamar County (Texas) Medical Association.

This association was recently organized at Paris with the following officers: Dr. W. G. McCuistion, president; Dr. John B. Chapman, vice-president; Dr. Alexander H. Lindsay, secretary; Dr. James M. Hooks, treasurer; Drs. Thomas Moody, and Joseph F. Clark, all of Paris, and John F. Dyer, Chicota, censors.

Floyd County (Ga.) Medical Society.

On August 4 this society was organized at Rome, in accordance with the plan suggested by the American Medical Association. The officers elected are: Dr. Ross P. Cox, Rome, president; Dr. Levi P. Hammond, Rome, vice-president; Dr. James C. Watts, Cave Spring, treasurer, and Dr. William J. Shaw, Rome, secretary.

Jackson County (Texas) Medical Association.

On July 28 the physicians of the county met at Edna and organized a county medical society, with the following officers: Dr. Joseph M. Richmond, Edna, president; Dr. J. C. Dobbs, Ganado, vice-president; Dr. Oliver H. Radkey, Manor, secretary and treasurer, and Drs. Robert E. L. La Bauve, Edna, John L. Lincecum, Victoria, and W. H. Minton, censors.

Collin County (Texas) Medical Association.

The Collin County Medical Association, at its meeting in McKinney, August 11, perfected its reorganization under the auspices of the state and National associations, with the following officers: President, Dr. James N. Mendenhall, Plano; vice-president, Dr. Austin T. Bryant, McKinney, and secretary-treasurer, Dr. Orville H. Kirkpatrick, McKinney.

Perry County (Miss.) Medical Society.

The physicians of Perry County met at Hattiesburg, August 20, and organized a county medical society, with the following officers: President, Dr. Charles W. Bufkin; vice-president, Dr. Robert B. Stapleton; secretary and treasurer, Dr. John J. Stevens; censors, Drs. Theophilus E. Ross and Walter W. Crawford, Hattiesburg, and Dr. Prentiss A. Carter, Augusta.

Black Hawk County (Iowa) Medical Society.

At a meeting of physicians of the county at Waterloo, August 17, Dr. Elmer E. Dunkelberg was elected chairman and Dr. Edward R. Shannon, secretary, both of Waterloo. After the plan of reorganization recommended by the American Medical Association had been explained the society was organized with the following officers: President, Dr. Elmer E. Dunkelberg, Waterloo; vice-president, Dr. John H. Crippen, Waterloo; secretary, Dr. William H. Bickley, Waterloo; treasurer, Dr. Will L. Hearst, Cedar Falls, and censors, Drs. Daniel W. Crouse, Waterloo, Frank H. Cutler, Cedar Falls, and M. R. Balliet, Laporte City.

Organization Work in Texas.

Although Texas is our largest state territorially, and its fifteen councilor districts cover immense and sparsely settled areas, some of them remote from railroads, the report of organization work is of the most encouraging nature. The counties, of which there are about two hundred and forty, are rapidly organizing, and it is safe to say that a majority of the 5,000 legalized physicians of the state will be officially represented in the house of delegates at the next annual meeting of the state association. This gratifying situation is due in some measure to an aroused general sentiment, which favors without qualification the splendid scheme of organization proposed by the American Medical Association. When occasion demands the councilor receives the active support of the best men of his district. They go with him to remote counties, and assist in their organization, at great sacrifice to their private interests. Moreover, the experienced and able secretary of the state association, who is serving in Texas with conspicuous ability the higher ends and aims of the great enterprise to which the medical profession of the United States is committed, watches and aids every important detail of the work of each district, and keeps the entire situation intelligently open to the profession. Let states less hopeful, but more fortunate in respect of location and means of communication, take courage and push along the good work in like manner.

Societies.

COMING MEETINGS.

Medical Society of the Missouri Valley, Omaha, Sept. 14-15.
Medical Society of Virginia, Roanoke, Sept. 15-17.
Medical Society of the State of Pennsylvania, York, Sept. 22-24.
American Association of Obstetricians and Gynecologists, Chicago, Sept. 22-24.
Colorado State Medical Society, Denver, Oct. 6-8.
Medical Association of the District of Columbia, Washington, Oct. 6.
Idaho State Medical Society, Boise, Oct. 8-9.
Mississippi Valley Medical Association, Memphis, Tenn., Oct. 7-9.
Vermont State Medical Society, Bellows Falls, Oct. 15-16.
New York State Medical Association, New York City. Oct. 19-22.

North Texas Medical Association.—This association has filed amendment to charter embracing the counties of Fannin, Hunt, Grayson, Tarrant, Johnson, Cooke, Delta, Hopkins, Kaufman, Rockwall, Collin, Denton, Dallas and Ellis.

Wabash County (Ill.) Medical Society.—This society met at Mount Carmel, August 4, and elected Dr. W. B. Moon, Bellmont, president; Dr. George C. Kingsbury, Mount Carmel; Dr. John B. Maxwell, secretary, and Dr. Sereno W. Schenck, treasurer, all of Mount Carmel.

Dallas County (Ala.) Medical Society.—At a meeting held August 6 in Selma, Dr. Henry D. Furniss, Selma, resigned as president, and was made an honorary life member; Dr. Barney

B. Rogan, Selma, secretary, was elected president, and Dr. Ira C. Skinner, Selma, secretary.

Mississippi Valley Medical Association.—The twenty-ninth annual meeting will be held in Memphis, Tenn., October 7 to 9, under the presidency of Dr. Edwin Walker, Evansville, Ind. The sections will meet at the Gayoso and the Peabody. Dr. John L. Jelks is chairman of the committee of arrangements.

Southern Minnesota Medical Association.—At the annual meeting in Winona, August 6, the following officers were elected: Dr. Christopher Graham, Rochester, president; Drs. William F. Milligan, Wabasha, and Frank W. Dimmitt, Red Wing, vice-presidents, and Dr. William T. Adams, Elgin, secretary and treasurer. The 1904 meeting will be held in Rochester.

BRITISH MEDICAL ASSOCIATION.

Seventy-first Annual Meeting, held at Swansea, Wales, July 28 to 31, 1903.

(By Our Special Representative.)

(Continued from page 572.)

Ocular Changes in Relation to Renal Disease.

Mr. Edward Nettleship contributed a paper on this subject. Although much is already known about the eye changes in renal disease, he said information is still needed, both from ophthalmologists and physicians, on several points, and he suggested the following heads as furnishing matter suitable for discussion:

1. Does albuminuric retinitis ever occur in primary acute nephritis other than the kidney affection of pregnancy?

2. Cases of retinitis from lardaceous disease of the kidneys and from nephritis due to inflammation of the bladder, ureter, or pelvis of the kidney should be recorded.

3. The retinitis of pregnancy. Cases of this are desired: (a) In which it is known that the kidneys were diseased before the first pregnancy; (b) in which there is positive evidence that they were sound. It seems that most of the cases of pregnancy retinitis occur between the ages of 30 and 40, after several pregnancies and several attacks of pregnancy dropsy, and that the prognosis for life is better than in ordinary renal retinitis. These facts harmonize with the other evidences that the kidney disease induced by pregnancy is a peculiar and often recoverable affection. All cases of pregnancy retinitis should be examined for signs of established chronic nephritis. The propriety of inducing premature labor may depend partly on the diagnosis in this respect.

4. Age and sex. If all cases of renal retinitis (except those due to pregnancy) are counted together without reference to age the males are found to be nearly twice as numerous as the females, the proportions being about the same as for chronic nephritis. But when the retinitis occurs early in life the sex proportions seem, from the scanty material available for comparison, to be almost reversed. All cases of renal retinitis in young subjects should be recorded.

5. Recognizing two chief factors in the production of renal retinitis—the state of the blood and the state of the retinal blood vessels—all cases are asked for in which a condition of visible disease in the retinal arteries without evidence of kidney disease has been followed sooner or later by unequivocal signs of chronic nephritis.

6. Do the characters of the retinitis in different cases, as has been recently asserted, justify any inference as to the kind of nephritis (chronic interstitial or chronic parenchymatous) from which the patient is suffering? Attention is here called to the importance of watching the course of the retinal disease from beginning to end, and of distinguishing between the two kinds of white opacities: the soft-edged, white, or grayish white patches in the nerve-fiber layer, and the brilliant, intensely white, sharply-defined patches composed of confluent dots situated in the deeper layers and often arranged in the familiar radiating pattern around the yellow-spot.

7. When retinitis occurs in both glycosuria and albuminuria, to which of these is it due? Retinitis in diabetic persons, whether their urine contains albumin or not, occurs later in life than albuminuric retinitis, but the relative liability of the sexes is about the same as in the ordinary albuminuric retinitis (excluding pregnancy cases).

8. Other points needing elucidation: The influence (a) of scarlet fever and (b) inherited syphilis in producing the chronic renal disease leading to retinitis; (c) the occurrence of renal retinitis in only one eye; (d) cases in which more than one attack of retinitis has been seen and watched through, with special reference to the changes left by the first attack, and to the effect of retinal atrophy on the characters of a second attack; (e) when pigment spots are left by renal retinitis, why are they so often found at the periphery of the fundus? (f) the cause of the night blindness occasionally met with in renal retinitis; (g) the nature and ophthalmoscopic appearances of the choroiditis said to occur in some cases of albuminuria; (h) the nature of the white, opaque thickening of the coats of arteries and veins seen after some cases, and of the appearances resembling retinitis pigmentosa after others.

The Management of Pregnancy Complicated by Uterine Fibroids.

Dr. Amand Routh, London, read a paper on this subject. After an introduction, the danger of the complication is discussed, and it shows that with modern methods the maternal mortality has been greatly diminished.

As to the effect of pregnancy on the fibroids it is doubted whether individual fibroids rapidly enlarge during pregnancy, and also whether marked atrophy usually takes place during involution. The tendency to degeneration of the fibroids, and the danger arising therefrom, especially as regards infection during the puerperium, is dwelt on, as well as the tendency of submucous fibroids to become extruded and necrotic.

In reference to the effect of fibroids on pregnancy, the view is taken that sterility is not often caused by fibroids, and if present is due to changes in the endometrium and to altered relation of tube and ovary. It is further shown that abortion is not often induced by fibroids unless they are submucous. Fetal malpresentations and placenta previa are shown to be frequent. Uterine inertia is not usual, but delay in labor is the rule. Postpartum hemorrhage is frequent. Obstruction to the birth of the child often threatens, but is almost consistently absent at labor owing to the spontaneous elevation of the pelvic fibroids during the last few weeks or days of pregnancy. Sepsis with secondary infection of the fibroids is a great danger in the puerperium.

Concerning the treatment, in all cases an expectant treatment is indicated unless there are urgent symptoms. (a) Before fetal viability, gentle attempts may be made to replace a pelvic fibroid. Induction of abortion should be abandoned. If urgent pressure symptoms supervene, myomectomy becomes the ideal operation for subserous fibroids, and failing that, hysterectomy. The indications for the two operations are discussed. (b) After fetal viability, reposition of an obstructing fibroid may be tried, leaving radical treatment for a later date. The danger to the mother of delivering a child by forceps, version, or embryotomy is insisted on. If a cervical fibroid be present it may be dealt with by vaginal enucleation as an alternative to panhysterectomy. In all other cases of obstructing fibroid, abdominal section is required, and as a first step the child must be delivered by cesarean section.

Subsequent alternative procedures are enumerated by the author as follows: 1. Cesarean section alone—this would rarely be the right treatment. 2. Sterilization of the patient by oöphorectomy, with the hope that atrophy of the fibroids would follow, would now rarely be considered a satisfactory operation. 3. Myomectomy. Sometimes this operation is indicated, but should always be preceded by cesarean section. 4. Abdominal hysterectomy. Preference is given to the supravaginal operation, with retroperitoneal treatment of the stump by Baer's or Chrobak's method, and to panhysterectomy by Doyen's method. One ovary at least, if healthy, should be retained.

Two successful cases at full term of supravaginal hysterectomy with retroperitoneal treatment of the stump were reported.

During the puerperium, if fibroids become infected from uterine sepsis, a prompt panhysterectomy, he believes, may save the patient's life.

Trypanosomiasis.

Sir Patrick Manson discussed this subject. After referring to the history of the subject and its importance, he discussed the following points:

1. *Examination of Blood for Tropical Micro-organisms.*—For an examination of the blood in the tropics, in addition to enumeration of the different kinds of blood corpuscles, three classes of micro-organisms have to be kept in view. Each of these demands its special method of preparation of the blood film and special magnifying power. The search for (a) filariæ is best conducted in thick, unfixed dehemoglobinized, anilin-dye stained films with a low magnification—½ inch to ¾ inch objective to ¾ inch objective; for (b) trypanosomes a thinnish, fixed anilin-dye stained film with an ⅛ inch to a ¼ inch objective; for (c) malaria parasites and bacteria a very thin, fixed and stained film with a 1/12 inch immersion lens.

2. *The Clinical Features of Trypanosomiasis.*—In the European (a) irregular fever, (b) fugitive patches of erythema, (c) irregularly distributed cutaneous and subcutaneous edema, (d) muscular debility, (e) rapid pulse, (f) history of painful inflamed bite. These seem to be constant. Additional but apparently not invariable or absolutely characteristic features are enlargement of the spleen, mononuclear leucocytosis and affections of the eye.

In the native, judging from some of Dutton's cases, the trypanosome may give rise to no obvious clinical symptoms.

3. *Possible Relationship to Other Diseases.*—An association with sleeping sickness has been pointed out by Castellani and confirmed by Bruce. Castellani, by indicating the frequent presence of the parasite in the cerebrospinal fluid and blood, and Bruce, by showing their invariable presence in all the considerable number of cases which he has examined at Entebbe, have adduced presumptive evidence in favor of regarding the trypanosome as the cause of this disease. Although such evidence points to such an inference, it can not be said to be conclusive. The occurrence of the parasite in the cerebrospinal fluid, that is, in close relationship with the seat of sleeping sickness—the nervous system—is a strong argument for the hypothesis; but the mere concurrence of the parasite and the disease in a limited number of cases coming from a very limited district must not be given too much weight.

He has shown for the Congo, and Low and Castellani for Entebbe, that a similar concurrence obtains in the cases of filaria perstans, but we now know that there are districts where filaria perstans is rare and sleeping sickness common, and vice versa; it is possible that when fuller investigation has been made into the distribution of the trypanosome we shall learn that a similar non-correspondence in the distribution of the latter parasite and this disease may obtain. Against a specific relationship of the trypanosome to sleeping sickness are the facts that the parasite has not given rise to the disease in Europeans, and that the parasite has not been found in sleeping sickness on the Congo or in West Africa. The former objection might be explained by the assumption suggested by Castellani that the trypanosome hitherto found in Europeans is a different species to that found in sleeping sickness; the latter objection, and it is one which is quite entertainable, might be explained by the probability that so far the blood in Congo sleeping sickness has not been critically examined for trypanosomes in a sufficient number of cases.

On the other hand, it is quite conceivable that the trypanosome of the African bears the same pathogenic relationship to the European that the trypanosome of the African wild game bears to exotic domestic animals; that is to say, that whereas the native man and beast are immune in a pathogenic sense to the native trypanosome, the exotic European and European domestic animals are not so. Such a theory seems to be more in harmony with the epidemiology, symptoms, and pathology of sleeping sickness than that enunciated by Castellani and endorsed by Bruce.

Certain obscure tropical fevers should be studied with an eye to a possible trypanosoma etiology, notably hyperpyrexial fever of West Africa and kala-azar of India and elsewhere.

Before much progress in this direction can be made, better and surer methods must be devised for determining the presence or absence of trypanosomes. We must have more easily applied microscopic methods, and, above all, we must find some easily available susceptible animal.

4. *The prognosis of trypanosomiasis* is not necessarily bad; that of sleeping sickness is always so. This is another argument against regarding sleeping sickness as a trypanosoma disease.

5. *Treatment* as yet must be conducted on general principles—rest and tonic influences.

6. *The prophylaxis* will be surely indicated so soon as we know what animal probably, judging by analogy and a small number of facts, one of the Tabanidæ is of the inoculating agent.

(To be continued.)

CANADIAN MEDICAL ASSOCIATION.

Thirty-sixth Annual Meeting, held at London, Ont., Aug. 25 to 28, 1903.

The President, W. H. Moorhouse, M.B., London, in the Chair.

This meeting was a very interesting and profitable one, and over 300 physicians were in attendance. A summary of some of the scientific papers follows.

Address in Medicine—The Lymph Circulation in Modern Medicine.

Dr. H. A. McCallum, F.R.C.P., delivered the address in medicine. He pointed out that the lymph circulation during the last decade has assumed enormous importance in the physiologic world. Twelve years ago Heidenhain experimented with different agents to determine their effect on the amount and character of the lymph coming from the thoracic duct; he was able to influence its quantity and quality.

From his experiments he concluded that the endothelial cells of the capillary wall acted as a secretive filter. Many physiologists from physiologic evidence have arrived at a separate conclusion that lymph depends on tissue activity; as an illustration, a limb in perfect repose gives no lymph from the lymph ducts; massage, active or passive movement, is at once followed by a free flow. The quiescent animal, it is now agreed, gives lymph from the thoracic duct, almost wholly obtained from the viscera.

In order to arrive at a clear comprehension the modern anatomy of the lymphatics should be considered. Ranvier, Sala, W. G. McCallum and Florence R. Sabine have separately agreed that the lymphatic system is a modified portion of the circulatory system; that it grew backward from the subclavian vein by the process of budding, gradually invading the tissues; that the ends of the lymphatics are blind, like the lacteals, and that they had no physical connection with the tissue spaces. Certain tissues, like cartilage and cornea, are not invaded by lymphatic capillaries.

These anatomic facts disprove all lymph circulation theories, since they prove that lymph is a double circulation composed of tissue juices and the lymphatic or absorbent circulation.

The lymphatic circulation is independent, the interchange on the part of lymph is to rid itself of offensive material and certain secretions as defensive proteids and to obtain in exchange from the blood nutritive material and oxygen.

The two great forces of lymph circulation are glandular activity and the muscular system. The great amount of the involuntary muscular tissue due to its wide area was shown to exist in the skin, modern research on the relation of the skin to internal viscera was pointed out, and the sympathetic pain reflected from the viscera could be palliated by a reflex act from the skin to the viscus; the lung reflex of Abraham was an example.

The importance of the skin as an external body connecting with all forms of impressions was pointed out, we would not possess a heat regulating mechanism if it were not that impressions could wake up the laboratories of the body. The application of cold, heat, sunshine and fresh air are primal forces, and they act on external body world as in treatment of phthisis, the cold bath treatment of typhoid and the massage treatment of malnutrition. If the skin is so potent, how great must be the influence of the central nervous system in influencing vital activity in the way of training the patient to cease complaining to minimize sufferings and to alternate periods of alertness and absolute repose.

The importance of the lymphatic circulation in the solution of unsolved medical problems and its ancient character were pointed out. It is a field of inquiry that will be enriched in the future.

The Physiologic Generation Cycle of Woman.

DR. JENNIE G. DRENNAN, St. Thomas, Ont., said that we can see in the process of evolution that structure is determined and preceded by function and function by environment. Thus in the generative system changes due to changes in environment occur. Adaptation and heredity are the two factors which cause the changes wrought by evolution. Thus evolution works both backward and forward. The physiologic generative cycle is comprised of three factors, ovulation, pregnancy and lactation. These follow each other in physiologic sequence, one being completed before another begins. Every physiologic process is accompanied by a physiologic hyperemia, and so during the different periods the circulation is increased in that organ, which is functionally active. If from any cause a larger amount of blood is directed to a non-active organ the active organ is deprived of some of its normal blood supply and its function is lessened.

Ovulation, with its attending sexual excitement, is to the mammal what blossoming is to the plant, an evidence on the part of each that a seed is ready for impregnation. Fecundation normally should follow ovulation, then pregnancy and lactation. This is the physiologic cycle in mammals, and the primitive human female. But in the woman of civilization this cycle is interrupted by a lesser, a monthly, one, consisting of ovulation and menstruation. This is a pathologic condition arising from non-adherence to natural law. In primitive woman this lesser cycle occurs only occasionally and does not interfere with the larger circle, but as the scale of civilization is ascended the reverse is the case. Civilization precedes menstruation. Every menstruation is the sign of a disappointed pregnancy. The human female has thirteen of the periods in a year; why this frequency in an animal whose offspring requires longer time for development *in utero* and for sustenance after birth? Should one not naturally expect ovulation to occur at much longer intervals? Such would be the case if natural law had been and were now obeyed; if an adaptation to a pernicious environment had not occurred.

In mammals and primitive woman ovulation occurs at distinct periods of the year and at no other time. Mating with the primitive woman was much like that of the brute creation now; as soon as she was sexually mature she married and entered on the physiologic cycle of a mammal, one factor of this cycle following another as night follows day and day night. As she nourished her child about two years, the length of the cycle would be about three years. Primitive peoples do not produce large families.

In the married aspirant to civilization a disrespect to natural law has arisen, and error has been handed down. As a race becomes more artificial in its mode of life it becomes a more sexually-inclined race; every factor in life is then sought as a source of pleasure. The sexual element becomes adapted to the new state of life; the function of the ovary is increased and ovulation becomes a monthly phenomenon and the lesser cycle predominates.

The Size of the Pupil as an Aid to Diagnosis.

DR. J. T. DUNCAN gave this classification:

A. Pupil may have pupils evenly contracted. This may indicate: (1) locomotor ataxia, (2) meningitis and encephalitis (early stages), (3) chronic inflammation, cervical cord, (4) apoplexy of pons, (5) epileptic fits (early), (6) uremia, (7) tobacco amblyopia, (8) retinitis, (9) opium poisoning, (10) use of myotics.

B. Pupils may be evenly dilated: (1) paralysis of both third nerves (post-diphtheritic), (2) intracranial tumors (late), (3) intracranial effusions, (4) irritation cervical sympathetic, (5) acute inflammation, cervical cord, (6) premonitory of locomotor ataxia, (7) after epileptic fits, (8) cataracts, (9) amaurosis, (10) acute mania or melancholia, (11) mydriatics.

C. Pupils may be unequal, then we suspect: (1) locomotor ataxia, (2) general paralysis of insane, (3) unilateral lesion of third or sympathetic nerve, (4) pain in branch of fifth nerve, (5) old iritis, (6) carotid aneurism or tumor of neck, (7) use of a myotic or mydriatic in one eye, (8) unilateral cranial lesion, (9) acute glaucoma (unilateral).

I. The pupils are contracted and fixed: In list A we exclude uremia, meningitis and encephalitis, retinitis, tobacco amblyopia. The remaining conditions can be differentially diagnosed.

II. Pupils are evenly dilated and fixed: Rare. Present in (1) amaurosis, (2) use of mydriatics, (3) complete paralysis of both third nerves.

III. Pupils are uneven but fixed: This usually points to locomotor ataxia or general paralysis of insane.

Surgical Treatment of Hallux Valvus and Bunion.

DR. JAMES NEWELL said, in this paper, that in hallux valgus the great toe is outwardly deflected, uncovering head of first metatarsal bone, and base of phalanx is dislocated outward, resulting in tissue hypertrophy and often false bursæ. Palliative treatment is of little use; it consists in the wearing of a proper fitting shoe and keeping the great toe in position by some mechanical means.

Cases with well-marked deformity and pain require an operation. The technic must be thoroughly aseptic, not forgetting the cleansing of the skin between the toes of the patient. Incision should be made along inner side of great toe with its center over the bunion, excise the false bursa if present, deepen incision and retract the tissues, open joint and divide the ligaments. Insert a small metacarpal saw, dividing the head of the metatarsal bone just behind articular cartilage, sawing through from above, downward and backward. With bone forceps trim off sharp edges and remove exostoses. Wound is stitched with silkworm-gut sutures, a pad of cotton is placed between great and second toes, a sheet-iron splint with an upturned piece to separate great and second toes and foot and leg bandaged. Passive motion is began in third week and splint removed in four weeks. The results of the operation are ideal.

(*To be continued.*)

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Local Anesthesia.

The following simple method of producing local anesthesia is noted in an abstract appearing in *Med. Age*, in which a solution composed of adrenalin chlorid and cocain is used in the following proportions:

℞. Sol. adrenalin chloridi ....ʒii 8|
Cocainæ hydrochlor. ....gr. v |30
Aquæ ....℥ss 15|

M. Sig.: Fold lint into four layers and saturate it with the foregoing solution and place it on the positive electrode of a galvanic battery. A large negative electrode should be applied elsewhere, and a current of 15 to 30 milliamperes gradually turned on and continued for 15 or 20 minutes. The surface should then be washed with ether, when superficial operations may be performed without pain and with no loss of blood. [The strength of the adrenalin solution is not given, but either 1-1,000 or 1-5,000 may be used.]

Foisy, in *La Presse Méd.*, combines the foregoing solutions as follows:

℞.	Sol. cocainæ (1-200)	ʒiiss	10	
	Sol. adrenalin chloridi (1-1,000)	gtt. x		65

M. Sig.: To be used locally in the necessary amounts.

In opening a felon or a painful boil he employs a weak solution of cocain, probably 15 drops of a 1 per cent. solution of cocain mixed with 4 or 5 drops of adrenalin. In cases where free incision or the removal of morbid tissues is necessary, such as incision of a carbuncle or removal of suppurating lymphatics, the following is used:

℞.	Sol. cocainæ (1-200)	ʒv-vi	20.-25	
	Sol. adrenalin (1-1,000)	gtt. 10-15		65-1.00

M. Sig.: To be used locally.

Cancer.

G. Mohn, according to an abstract in *Medicine*, states that he has obtained positive results in the treatment of ulcerating epitheliomas by simple applications saturated with adrenalin. By this application the hemorrhage decreased, the pain was relieved and the general health improved. In his opinion the growths were markedly retarded in their progress for a considerable length of time. In relieving the pain produced by cancer of the stomach, Robin, in *Rev. Med. du Canada*, recommends the following combination:

℞.	Cocainæ hydrochlor.	gr. 3/4		05
	Codeinæ	gr. 3/4		05
	Aquæ calcis	℥v	150	

M. Sig.: One teaspoonful every hour until relieved.

Facial Erysipelas.

W. F. Rodue, in the *Surg. Clinic*, recommends the following combination in the treatment of facial erysipelas:

℞.	Ichthyol	ʒii	8
	Etheris	ʒi	4
	Collodii	ʒv	20

M. Sig.: Apply locally with a camel's-hair brush two or three times daily.

According to the author this solution checks the spread of the disease and quickly relieves the pain. In those individuals who are asthenic he prescribes tincture of ferric chlorid internally and in suppurative cases calcium sulphid.

Darlin advocated the use of collodion, claiming that this dressing diminished the temperature of the part, and by compression interfered with septic absorption.

The following combinations are of value, according to *Merck's Archives*, in the local treatment of erysipelas:

℞.	Resorcin	ʒi	4
	Ichthyol	ʒii	8
	Ung. hydrarg.	℥i	30
	Lanolini	℥i	30

M. Sig.: Anoint the parts freely, cover with oil silk and apply light dressing; or:

℞.	Acidi picrici	gr. x		65
	Etheris q. s. to dissolve.			
	Aq. destil.	℥iii	90	

M. Sig.: Paint over the affected area two or three times daily.

The following combination containing creolin and iodoform has also been prescribed with good results:

℞.	Creolin	ʒss	2
	Iodoformi	ʒii	8
	Lanolini	ʒv	20

M. Ft. unguentum. Sig.: Apply locally with a camel's-hair brush and cover with gutta percha.

The following, containing lead and opium, is a common remedy, which acts very efficiently in some cases:

℞.	Plumbi acetatis	ʒi	4
	Tinct. opii	℥i	30
	Aquæ q. s. ad	Oi	480

M. Sig.: Shake the bottle, and apply on lint thoroughly saturated with the lotion.

Urticaria.

Balzer, according to the *Internat. Med. Mag.*, has found that a solution of menthol, thymol and carbolic acid is of service as a local application in the treatment of urticaria.

He either employs them in a 2 per cent. solution in alcohol or aromatic vinegar or combined as follows:

℞.	Acidi thymici	gr. xv	1
	Acidi phenici	gr. xxx	2
	Alcoholis	℥vi	180

M. Sig.: Apply locally.

When the eruption is persistent and a prolonged treatment is required, he prescribes it in the form of an ointment. In urticaria caused by contact with insects he has found the application of ichthyol the most useful preparation. The treatment, however, must not be entirely local, but the careful regulation of the diet and attention to the digestive tract is of equal importance.

Anal Fissure.

The following outline of treatment, according to *Amer. Med.*, is recommended in the treatment of fissure of the anus:

The constipation should be combated by the administration of a teaspoonful of castor oil in the morning or a teaspoonful of the following powder in a small amount of water before retiring:

℞.	Magnesiæ (calcined)		
	Lactose, āā	ʒv	20
	Potass. bitartratis		
	Sulphuris (washed), āā	ʒiiss	10

M. Sig.: One teaspoonful at bedtime in a little water.

At 11 o'clock in the morning an enema of linseed water or hot marshmallow water may be given. When the pains are less severe, these may be substituted by an enema of a decoction of krameria (20 parts to 1,000).

The following combinations should be used as ointments locally:

℞.	Ext. krameriæ	gr. xxx	2	
	Ext. opii	gr. viiss		50
	Cocainæ hydrochlor.	gr. xii		75
	Ung. populi	℥i	30	

M. Ft. unguentum. Sig.: Apply locally night and morning; or:

℞.	Ext. belladonnæ	gr. xv	1
	Plumbi acetatis (neutral)	gr. xlv	3
	Adipis	℥i	30

M. Ft. unguentum. Sig.: Apply locally. The following suppositories may be used as a substitute for either of the above:

℞.	Iodoformi	gr. ii		12
	Ext. opii	gr. 1/3		02
	Ext. belladonnæ	gr. 1/6		01
	Ol. theobromæ	gr. xlv	3	

M. Ft. suppos. No. i. Sig.: One may be used at night and another in the morning if necessary. Forced dilatation should be practiced and locally cauterization with the silver nitrate stick every few days.

Medicolegal.

Simulation as to Pain Subject for Expert Testimony.—The Court of Civil Appeals of Texas says that, in the personal injury case of McGrew vs. the St. Louis, San Francisco & Texas Railway Company, where the party suing had been thrown from a buggy in consequence of the frightening of a horse which she was driving, that there was much evidence in the record to the effect that she was not injured to the extent claimed, and that some of her pretended injuries were feigned and simulated. One of the attending physicians who examined her injuries, and treated her for the same, testified that he had employed certain tests to ascertain whether she could feel pain in her limbs. Then he was asked whether or not she was simulating the absence of pain when the tests were applied. The court holds that it was error not to admit this evidence, the question asked, and the proposed answer thereto, being, in its opinion, the subject of expert testimony—a matter peculiarly within the province of the physician.

A Profession is Property—Regulation of Practice.—The Supreme Court of New Jersey holds, in State vs. Chapman, that a calling, business, or profession chosen and followed is property. The legislature can not destroy it by statute without providing for compensation, any more than it can authorize the taking of real estate for a public use except on compensation. But it is within the power of the state to place reasonable regulations on the business or calling of any person. The laws regulating dentistry are of later enactment than those regulating the practice of medicine, but the principles underlying their legality are the same. And it is within the power of the state, under the police power, to impose by statute reasonable restrictions as to registration and the obtaining of a certificate of authority to engage in the practice of dentistry, and to make it a misdemeanor for a person to practice without first obtaining such certificate. The New Jersey act of March 17, 1898, entitled "An act to regulate the practice of dentistry in the state of New Jersey, and to repeal certain acts now relating to the same," is not an act taking or destroying property, but is a reasonable regulation of the practice of dentistry in that state. The act does not impair vested rights, nor is it in its criminal provisions an *ex post facto* law.

Power of President and Manager to Employ Physician.—The Court of Civil Appeals at Kansas City, Mo., holds, in the case of Evans vs. the Marion Mining Company, that the company's president and general manager had authority to bind it for medical services rendered by a physician in attending one of its employes, hurt in the course of his work through the negligence of the company. The contrary contention, it holds, was not supported by the cases cited therefor, it not appearing in them that the injury happened through the negligence of the company sought to be held liable, while, on the other hand, the officers representing the companies were of much inferior grade to that of president and general manager. In this case, it says, it must be assumed that the employe was injured through the negligence of the company. It was, therefore, liable to him for the damage occasioned by the injury, including the expense of a physician. It was directly interested in seeing that such injuries were not made worse by lack of medical attention, and that the suffering and other ill consequences should be lessened in every proper way. Its president and general manager, who was necessarily in charge of its general interests and welfare, was certainly not acting outside his duties when he was doing that which was lessening the damages for which he found it had become liable.

Duty of Railroad in Selecting Physician—Evidence.—In the case of Poling vs. the San Antonio & Aransas Pass Railway Company, where it was sought to recover damages for the loss of sight of an eye, alleged to have been occasioned by the negligence of the company in the selection of the physician who treated the case, the Court of Civil Appeals of Texas holds that there was no error in excluding evidence offered by the party suing to prove that the physician never stood an examination for license to practice medicine in Texas. It says that as to whether the physician stood an examination before the board of medical examiners that issued him a certificate authorizing him to practice medicine was immaterial to any issue in the case. The certificate was issued to him, and as to whether the board acted irregularly in its issuance could not be made a subject of inquiry in this case. Nor can the court perceive on what principle it could be contended that a publication in a local newspaper of the proceedings of the medical board of examiners of that judicial district could be admitted in evidence in this case, such publication being purely hearsay, and there being no evidence introduced or offered tending to show that the company had any knowledge of it, either at the time or after it employed this physician. Taking up the instructions given the jury, the court finds no error in telling them that, all of the evidence showing that the company derived no profit from the retention of the 50 cents per month hospital fund from each of its employes, neither had it designed same for profit, the only measure of duty owing to the party suing, an employe, by the company, arising from its agreement to furnish him with medical attention when needed, was the use of ordinary care to select, employ, and retain a competent physician as its local physician for the treatment of the party suing and its other employes in cases of sickness or injury. If they believed that the company selected, employed and retained this physician as its physician at that place, and that in selecting, employing and retaining him it used ordinary care—that is, the care that an ordinarily prudent person would have used—to select a competent physician they would find a verdict for the company, whether the physician treated the eye of the party suing properly or not.

Physician Immediately, Continuously, Wholly Disabled.—In the case of Brendon vs. the Traders' and Travelers' Accident Company of New York, it appeared that the party suing, a physician, while obliged to stand in a crowded street car, and while holding on to a strap, was, by the car starting suddenly to go around a curve, swung violently around, his weight resting on his left foot, which was held in place by the feet of other people, and his knee was twisted and strained. He felt quite a little pain at the time and a few blocks further on he transferred to another car and went to his home. The knee continued quite painful, and commenced to swell that evening. He put on cold applications and remained at home. This was the 18th of the month. In the morning the pain and swelling continued, but he made a necessary visit to a patient near by, and then returned home, and there remained. The next day the knee was still more swollen and painful, and he could scarcely move it at all. On the 21st its condition was such that he was obliged to go to bed and have it treated. A physician was called, and the knee was put in splints, and kept immovable and bandaged. He remained in bed for nearly three weeks. The First Appellate Divisiön of the Supreme Court of New York holds that the accident "immediately, continuously and wholly disabled" him from performing any and every kind of business pertaining to his occupation, within the fair intent and meaning of an insurance policy. It says that the fact that his sense of his professional obligation to his patient led him to make a visit when he was in a crippled and substantially disabled condition was not sufficient, in and of itself, to show that he was not continuously and wholly disabled. The injury had been sustained. It affected him immediately. The disability attached immediately, and was progressive and continuous. If the insurance did not cover such a condition, it was of little value; and to allow an insurance company to receive large premiums and escape liability in these circumstances would be to sanction the perpetration of a fraud on its policy holders. His failure to make any claim for the first three days, in that he claimed for total disability for three weeks from the 21st only, may have been a waiver of the insurance for that time, and it was some evidence to be considered by the jury on the question of whether his disability was immediate; but he was not estopped thereby from claiming immediate, continuous and total disability, in order to recover the insurance for the period for which he had presented a claim, which was more favorable to the insurance company than the facts warranted.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

August 22.

1 *Case of Splenomedullary Leukemia Successfully Treated by the Use of the Roentgen Ray. Nicholas Senn.
2 *The Management of Cases of Pulmonary Tuberculosis in the Dispensary. James A. Miller.
3 Secret Poisons and Their Uses in Ancient Times. J. W. Wainwright.

4 *Purpura Hemorrhagica Fulminans, with Report of a Case. Henry G. MacAdam.
5 *A Study of a Scarlet Fever Epidemic. Alfred C. Haven.
6 *A Preliminary Report on Some Experiments with the McGraw Elastic Ligature. M. S. Kakels.
7 Poisoning with a Small Dose of Quinin. M. Goltman.
8 Strangulated Oblique Inguinal Hernia in a Child Eleven Days Old; Operation. J. Hutchings White.

1. **Splenomedullary Leukemia Cured by Roentgen Ray.**—Senn states that he has seen many cases of the different varieties of leukemia, but the case which he describes in detail is the only one that has recovered. He attributes this exceptional result entirely to the prolonged use of the *x*-ray. He adds that he has so far not seen a single case of either carcinoma or sarcoma benefited by Roentgen treatment, but the curative power of the *x*-ray in pseudo-leukemia and genuine leukemia promises to accomplish what heretofore has not been obtained by any kind of medication. It seems to prove that, etiologically at least, both conditions are analogous, or at any rate closely allied. The case described was that of a foreign-born Jewess, 29 years of age, with typical splenomedullary leukemia, rebellious to all measures. The case appeared hopeless when, as a last resort, the *x*-ray treatment was commenced, Feb. 3, 1903, about three weeks after her admission to the hospital. The spleen, the lower end of the sternum, and the epiphyseal extremities of the long bones were exposed to the action of the rays daily for from ten to twenty minutes. During the course of the treatment the use of the *x*-ray had to be suspended for a day or two on several occasions owing to a high temperature and other symptoms of intoxication. The constitutional symptoms became very prominent at the time the spleen first presented indications of progressive decrease in its size, about three weeks after the beginning of the treatment. The blood examinations were repeated at intervals of a few days, and it was noticed that improvement kept pace with the reduction in the volume of the spleen. The first decided changes observed were the gradual disappearance of the myelocytes and eosinophiles, and the return of the erythrocytes to their normal shape. Examination of the blood made April 12 showed no myelocytes, and only a very few eosinophiles and very little poikilocytosis. March 12 the patient left the hospital, but was treated daily in the outdoor department. The spleen was so enlarged at first that it simulated a pregnancy at term, but retrogressed to its normal outlines as he shows in a photograph of the patient. He adds that there can be no longer any doubt in regard to the microbic origin of leukemia or to the anti-microbic action of the Roentgen ray. The transillumination of the affected bones undoubtedly accomplished its share in destroying the microbes of the general infective process, as the pain and tenderness disappeared entirely, as well as the occipital headache, during the early part of the treatment. He believes that the microbes of the splenomedullary leukemia are very susceptible to the destructive action of the *x*-ray, as the response to this treatment is very prompt and often violent, followed by a speedy return to normal of the spleen, medullary tissue, and the histologic constituents of the blood.

2. **Management of Pulmonary Tuberculosis in the Dispensary.**—Miller outlines the measures in vogue at the Vanderbilt Clinic, New York, to treat the tuberculous who are unable to go to a sanatorium. Two weeks of absolute rest are enforced, and if there is fever, this rest should be strictly in bed. When they resume work they are instructed to avoid all unnecessary exertion or exercise, to rest at odd moments whenever possible, and to rest absolutely after working hours. The occupation is changed if necessary. When a determined effort is made it is often possible to effect a very fair "rest cure" even while a patient is in active occupation, and perhaps supporting a family. Milk and raw eggs are the main reliance for superalimentation. He gradually accustoms his patients to the ingestion of two or three quarts of milk and from six to ten raw eggs every day, in addition to a regular diet of simple food. The increased expense of such a diet is borne by the patients or by the Charity Organization Society. In medication he prefers to err, if at all, by too little medication rather than by too much. These measures are supplemented by inspection and regulation of the homes, for which the services of a regularly trained nurse are the main reliance. She visits, makes her report, instructs the family and calls the attention of some charitable society to its needs if required. In 35 cases treated on these principles, 22 patients have increased in weight an average of four pounds to a maximum of twelve pounds; 7 of the 22 were early cases, 5 were moderately advanced, and 10 were advanced cases.

4. **Purpura Hemorrhagica Fulminans.**—MacAdam reports what he calls the first case on record of purpura hemorrhagica treated with adrenal gland preparation. The patient was a child of five. In half an hour after the purpura was recognized the child was almost moribund and had vomited several pints of blood. The case looked hopeless. Twenty drops of adrenalin solution were administered internally in a tablespoonful of water. At the end of fifteen minutes the child regained consciousness. A little color appeared in the cheeks and the pulse was perceptible at the wrist. Ten drops of adrenalin were then given and the patient continued to show evidences of improvement. For three days she received ten minims of adrenalin every three hours in orange-juice, no nourishment being permitted. At the present writing, he adds, she eats and sleeps well, apparently none the worse for her narrow escape, and but for a slight anemia, is as well as ever.

5. **The Lake Forest Scarlet-Fever Epidemic.**—Haven states that there were only 2 deaths in the 108 cases reported. The sore throats, which he considered the manifestation of scarlet fever in immunes, were the most prolific source of the spread of the contagion, also the fact that many of the cases were exceedingly mild. Fully one-third of all the cases were young adults, over 15 years old, and no age up to 40 seemed exempt. A house-to-house inspection was instituted. Every case was promptly isolated and the patient not allowed to regain his liberty until all desquamation had ceased, after which the place was fumigated by formaldehyd gas and steam and the disinfector empowered to burn mattresses and whatever else he deemed wise to destroy. A temporary auxiliary hospital was organized for scarlet fever and the hospital ambulance was fumigated each time it was used. No children were allowed on the streets, all visiting and public gatherings were positively forbidden, and special police sworn in to see that all regulations were obeyed. The epidemic vanished more quickly than it appeared, after lasting about ten weeks.

6. **The McGraw Elastic Ligature.**—Walker's conclusions in regard to this elastic ligature, given in The Journal, xl, p. 166, with five cuts, are confirmed by Kakels' experimental research on a number of dogs. He found it the quickest of all known methods of anastomosis, and states there is no loss of blood except the slight amount produced by the Lembert sutures on the serous surfaces. It is as simple as, if not simpler than the Murphy button, and there is absolutely no escape of intestinal contents, and therefore no exposure to infection of the peritoneum from this source. There is no shock, on account of short exposure and little handling of viscera, and very few lesions are made. There seems to be a uniform coaptation of peritoneal surfaces of the entire circumference of the approximated ends. The bowel seems to have been cut through without sloughing. McGraw states that three or four days is sufficient time to provide for a free opening, but his experience does not confirm this. The cutting through was only partial in 2 dogs killed the third and fourth day after entero-enterostomy, while in 3 gastroenterostomies there was only commencing severance the fifth day. The failure to cut through he attributes to too thin a ligature and to the greater thickness of the dog's stomach and intestine than that of man. For man it would be safer to use a ligature of 3 or 4 mm. thickness, and we should not hesitate to take more than an inch and a half of tissue in the ligature (especially in gastroenterostomies), as the more tissue and the thicker the ligature, the more pressure will be brought to bear and the quicker it will cut through. Barring the disadvantages caused by its slow action in cutting through, he qualifies this ligature as superior to all other methods of intestinal approximation.

Medical News, New York.

August 22.

9 *Cardioptosis. Albert Abrams.
10 Management of Breech Presentations. E. M. Thomas.
11 *Amber Yellow Glass in the Examination and Treatment of Eyes. H. H. Seabrook.
12 *The Treatment of Chronic Catarrhal Deafness (Otitis Media Catarrhalis Chronica). George W. Hopkins.
13 *The Clinical Value of Blood Pressure. H. Richardson.
14 *Tying and Care of the Umbilical Cord. Albert S. Harden.
15 The General Practitioner and His Relation to Early Surgical Operations. E. B. Montgomery.
16 *Other Causes than Syphilis for Paresis. H. Preston Sights.

9. **Cardioptosis.**—Abrams reviews his experience with voluntary cardioptosis, cardioptosis associated with ptoses of the abdominal viscera, the cardioptosis of accommodation, and primary essential cardioptosis. He says of the latter:

> It may often be present without subjective symptoms. In other instances a feeling of weight or oppression is experienced in the lower chest which is referred by the patient to the lower sternal region or epigastrium associated with epigastric pulsation and dyspnea. The latter is intensified by exertion. The upper portion of cardiac dulness, superficial and deep, will be found to be lower than normal. The apex beat is with difficulty palpated and, in lieu of the punctated beat, a diffuse one is felt. Auscultation may or may not elicit cardiac murmurs and, if present, they are greatly influenced by posture—a certain posture will bring them in evidence, whereas another posture will cause their evanescence. The murmurs are probably accidental and dependent on the malposition of the heart. The pulse suggests diminished tension of the arterial wall; it is soft, readily compressible and its dicrotic character is clearly brought out in the sphygmogram. The pathognomonic signs of cardioptosis are elicited by skiascopy. The long axis of the heart appears to be practically parallel with the surface of the diaphragm; the boundaries are poorly defined and deep inspiration does not bring into evidence the clearly-defined space between the heart and the diaphragm. This posture of the heart could be assumed if the midriff were abnormally high, as in abdominal distension, yet, if the long axis of the heart were measured, it would be found by describing the distance of the axis on the chest wall, that it would extend higher in the thorax than would a normal heart. The highest anatomic point of the heart is represented by the left auricle, which is at the lower border of the sternal insertion of the second rib, its lowest point is at the upper border of the sixth costal cartilage or in the fifth intercostal space just within the mammary line. Measurement of the long axis of the heart in cardioptosis would show that the heart lies lower than normal. The site of the normal heart is influenced by respiration and attitude. In cardioptosis there is little or no respiratory or attitudinal dislocation.

Treatment is limited to the wearing of a good fitting abdominal support with pressure exerted in the upper abdomen. In cardioptosis associated with Glénard's disease, exercises having for their object strengthening of the abdominal muscles and the diaphragm often yield excellent results associated with massage, faradization and hydrotherapeutic procedures. He has seen no benefit from medication.

11. **Yellow Glass in Examination and Treatment of Eyes.**—Seabrook relates tests with photochromotherapy of the eye, having found that there was less congestion, lacrimation, photobia and pain in examined eyes, when an amber yellow glass lens was used than without it. Vision is not impaired by the yellow glass, chromatic aberration of the eye is corrected by it, and dazzling reflections are softened and modified. The sphincter of the iris is not contracted so much by yellow as white light. The indications for the use of yellow glasses in the treatment of asthenopia and ocular neuralgias are easy to determine. The most beneficial results might perhaps be expected in that class of cases having diminished vision and hyperesthesia of the retina, and he reports three such cases confirming this assumption. His experience with these and other ocular affections shows conclusively that amber yellow glass has certain advantages for the ophthalmologist and good effects on the internal structure of the eye in certain conditions. He uses in examinations a bi-convex lens of white glass split and cemented on a plain glass of medium light amber yellow. For patients he orders amber yellow glasses. He had no experience of their use in "summer conjunctivitis" when he wrote, but believes they will prove particularly soothing in this case, protecting against irritation and improving vision.

12. **Treatment of Chronic Catarrhal Deafness.**—Among other constitutional causes of this condition Hopkins mentions that disordered digestion aggravates and perpetuates a large proportion of cases. Gout is another factor sometimes overlooked, as also typhoid fever. He has lately been experimenting with an electric douche applied to the entire intra-tympanic cavity. The promptness with which relief follows this electrolytic-cataphoric application is sometimes remarkable. He found iodin cataphoresis a valuable adjuvant in certain selected cases, the auditory canal being filled with iodin solution and a cataphoric electrode applied, anode direct to the tympanum. His experience with superheated air has also been favorable. Scores of cases which had obstinately resisted every other form of treatment slowly, but gradually, retrogressed under the application of superheated air to the tympanum until marked improvement in hearing and relief of tinnitus resulted. He believes that the superheated compressed-air treatment, when indicated and judiciously employed, in conjunction with such other measures as may be indicated, will give results which would be utterly unattainable without its aid.

13. **Clinical Value of Blood Pressure.**—Richardson describes the instrument introduced by Hill and Bernard, proclaiming that it is exact and eliminates the personal equation in observation. It consists of a rubber bag connected with a dial graduated in mm. Hg. The bag is securely and tightly fastened around the arm or leg of the patient, and air pumped into the bag till the pressure is sufficient to close the artery; the point of closure being indicated by the cessation of the oscillations of the needle of the aneroid. To obtain the mean pressure, the air is allowed to escape from the bag until the maximum oscillation of the needle occurs, at which point the pressure in the artery and in the bag are the same. It requires very little practice to become familiar with the instrument. There are two pressures in the arterial system which can be estimated by this instrument, viz., the maximum or force of the systole and the mean or the pressure in the artery. As the arteries collapse if empty, it is evident that the force required to obliterate them when full will represent the force of the blood driven into them by the heart. He calls attention to the high mean blood pressure as an important early, diagnostic sign of Bright's disease. It may be determined even before the apex beat has moved to the left. He describes the variations in the blood pressure induced by different affections, as he determined them with this instrument, claiming that from the clinical standpoint, the observation of the maximum and minimum blood-pressures and their relation to one another is of immense advantage, not only as an indication for treatment but also as a measurement of progress.

14. **Care of the Umbilical Cord.**—Harden uses tape and has never seen hemorrhage or laceration of the cord in 500 cases in which it was tied with tape. In 35 cases in which silk was used, he noted 5 cases of laceration and 5 of hemorrhage. After cleansing the region he draws over the cord a piece of sterile gauze, 4x4 inches doubled, with a small slit in the center. He pulls the cord through this by the strings of the ligature and pushes the gauze down on the abdomen, then draws it up over the cord and cuts the ends of the tape. This plain dry dressing can be left untouched until the cord falls off, and does not offer a culture medium for germs as when salves, etc., are used.

16. **Other Causes than Syphilis for Paresis.**—Sights argues that the prevailing cause of paresis is an overworked mind centralizing the mental energies without relaxation, whether in worry over financial troubles or over syphilitic infection or a concentration of the mental forces in any single avenue of life. Mental worry and nervous strain precipitate the disease in susceptible individuals, especially in those who are sensitive, with an inherited pessimistic tendency.

Boston Medical and Surgical Journal.

August 20.

17 Memorial Meeting to Morrill Wyman. Henry P. Walcott and others.
18 *The Surgical Treatment of Gastric Ulcer. John C. Munro.
19 *The Medical Treatment of Gastric Ulcer. Hubert G. Wilbur.

18. **Treatment of Gastric Ulcer.**—Munro pleads for the more intimate association of the internist and the surgeon in the study of gastric ulcer. The physician does not yet fully appreciate that an operation performed on the average patient with a mortality so small that it may practically be disregarded, becomes serious or even unjustifiable if done in the presence of persistent hemorrhage, prolonged sepsis, starvation,

absorption of ptomains, etc. To determine whether there is a condition amenable to medical treatment the physician must experiment to a certain extent. If he succeeds, well and good; if he fails, he must be willing to seek the co-operation of the surgeon, or better, he should have sought it early in order that both should study the case and both should learn, each from the other's findings. The following types he regards as best considered as surgical: probable cases of relapsing acute hemorrhage; cases with hemorrhage if persistent and causing anemia; perforation; recurrent ulcer, pure and simple, attended with dyspepsia and starvation; pyloric obstruction; adhesions *following* ulcer or independent of it; scar contraction of the body of the stomach, and some cases of intractable dyspepsia, perhaps originating in an ulcer, and for which no definite pathology is known.

19. Medical Treatment of Gastric Ulcer.—Wilbur refers in the course of this article to the tendency of anemia to induce gastric ulcer. Experiments on animals have shown that gastric ulcer develops from much slighter irritation and heals more slowly when the animals have been rendered anemic than when the blood is in its normal condition. In chlorotic females it would be wise to regulate the diet to avoid very hot things, coarse foods, highly acid and highly seasoned foods, also avoid *corsets and tight clothing. Occupation may have its effect in* the causation of ulcer. Seamstresses, typewriters, tailors and clerks, who lean against a machine or desk, are all liable to ulcers. In case of perforation, surgical interference is at once demanded. If the surgeon is not at hand, give morphia subcutaneously to quiet peristalsis and relieve pain, and brandy and coffee by enema to sustain the heart. Hemorrhage occurs in about half the cases. In repeated and profuse hemorrhage Dreschfeld advises turpentine. He gives it in capsules or in emulsion. He cites several cases of hematemesis rebellious to the usual measures, the patients pulseless and blanched, in *which the first dose of turpentine arrested the hemorrhage. It* is well borne by the stomach.

American Medicine, Philadelphia.

August 22.

20 *Enterostomy, with Report of Cases. J. M. T. Finney and Omar Pancoast.
21 *Enteroptosis: Its Etiology, Symptomatology, Treatment and Prognosis. (Continued.) Thomas R. Brown.
22 *Course of Diseases During Pregnancy. E. Castelli.
23 *Treatment of Typhoid Perforation, with Report of a Case. William C. Voorsanger.
24 *Etiology of *Dysmenorrhea.* J. *Thompson* Schell.
25 *A Successful Treatment for Morphinism, with Report of Case. *J. Ben. Jones.*

20. Enterostomy for Drainage and Nourishment.—After the loop of bowel is brought out and opened, a rectal tube is inserted first in one direction and then in the other, for several feet each way. This allows escape of gas and feces with less risk of soiling the peritoneum than by other methods. The special indications for enterostomy considered in the article are: 1, temporary drainage of a distended intestine, allowing it to regain its normal tone in cases of *functional paralysis* of the bowel of septic or other origin, especially in those cases following appendicitis with peritonitis. 2. To enable one to nourish a patient whose *stomach and rectum are* for *any* reason irritable and unable to retain or absorb a sufficient amount of nourishment. The operation of enterostomy, when quickly done under local anesthesia, is a comparatively slight one and causes little disturbance to the patient. The relief afforded thereby often enables him to withstand, later, more radical measures. The amount of fluid that can be given in twenty-four hours by this means and retained is surprisingly large. Finney calls attention *not only to the advantages of relieving* the distended intestine, but insists that the intestinal fistula once established should be looked on more as a mouth than *as an anus. It should* be used for irrigation of the intestinal canal, for the nourishment of the patient and for the introduction of cathartics. He has often noticed that food introduced into the intestinal canal through the fistula had of itself a stimulating effect on peristalsis. He reports seven cases in detail, some *followed by postmortem examination,* as the enterostomy was undertaken as a last resort. It always caused great relief and postponed the inevitable fatal termination, and saved several *otherwise doomed patients.* The fistula usually closes spontaneously.

21. Enteroptosis.—Brown describes in this part of his article the *symptoms of enteroptosis in general.* He *says:*

> There may be absolutely no symptoms associated with the condition *on the one hand, and this is especially* so in the acquired cases, while on the other hand we may have symptoms of the most aggravated type of neurasthenia, to which are added *various* abdominal symptoms due to displacement of the various viscera, such as indigestion, constipation, pain in various portions of the abdomen, a feeling of a lack of abdominal support and many other symptoms.
>
> *Among the more important objective* symptoms may be mentioned a flattened abdomen, or one flattened in the epigastric region and distended *below the level of the umbilicus, sensitiveness to pressure* near the tenth rib, a cord-like transverse colon, through which the pulsation of the aorta can be distinctly felt, while in all cases a careful examination of the abdomen reveals the displacement of several of the viscera. Some authors insist that pain and fatigue *in the early afternoon and in the very early* hours of the morning are important, because these hours correspond in general to periods of duodenal digestion, while in the severe cases many describe marked nervous crises, hysteria, insomnia and despondency.

He discusses the frequency, etiology, symptomatology, treatment and prognosis of enteroptosis, gastroptosis, nephroptosis and hepatoptosis, quoting extensively from international literature.

22. Course of Diseases During Pregnancy.—Castelli concludes his paper from the number of March 28, studying diseases of the *respiratory apparatus during pregnancy and also diseases* of the liver and kidneys. He states that the physician must bear in mind that there is a diminution of hemoglobin in the blood during pregnancy, and with this diminution there is a corresponding lessening of oxidation or respiratory power of the blood and an increase in the carbonic acid discharged by the lungs. In chronic nephritis the death of the child from placental changes is so common that consideration for the life of *the child must be always subsidiary to the interests of the* mother. He believes that the danger to the mother increases and the hope of giving birth to a living child diminishes, the earlier the lesion *of the kidney manifests itself in pregnancy.* If nephritis is shown in the earlier period of pregnancy, the chances of recovery and of a living child are problematic, while if the pregnancy is stopped in time, the recovery of the mother is certain. He advises intervention between the fifth and sixth months. Waiting, while of no advantage to the fetus, may prove a great danger to the mother. In regard to tuberculosis he remarks that athrepsia, as a rule, is produced by the tuberculous *mother,* whose *infection* was *not* sufficient to kill the fetus in intrauterine life.

23. Typhoid Perforation.—Voorsanger lays stress on the white blood count in the diagnosis of *typhoid,* attaching as much, if not more, importance to it than to the Widal reaction. The leukopenia occurs during the first few days, and is always very positive, being, as a general rule, between 3,000 and 5,000. A rise always means a complication. In the case of perforation described the *only* symptoms were the *dropping* temperature, the high pulse and tympanites.

24. Etiology of Dysmenorrhea.—Schell emphasizes that the origin of dysmenorrhea may be local or pelvic, general or constitutional, or merely reflex, or it may be due to a combination of two or more of these causes.

25. Hyoscin Treatment of Morphinism.—*Jones reports* the particulars of a case treated with wonderful success according to the method advocated by Dr. Geo. E. Pettey. His principle *is that morphinism is due to autotoxemia,* and the chief cause of the phenomena known as withdrawal symptoms is the presence of this toxic matter in the system and not the *drug* itself. When the system is cleansed of the accumulated effete material, autotoxemia overcome, and the portal system disengorged, morphin can be at once withdrawn without shock, collapse, or danger to life, and the suffering subsides in a few days. He gives purgatives, hyoscin and strychnin and sodium hyposulphite. Jones also witnessed ten other patients thus treated. There was no appearance of collapse, heart failure or other untoward symptom *in any case. and there was an entire* absence of the nervous symptoms usually encountered. The patients slept almost normally from the very beginning of treatment. The details of Pettey's method were published in The Journal recently, xl, p. 1757.

New York Medical Journal.

August 22.

26 *Relation of the Anesthetist to the Patient and to the Surgeon: with Some Interesting Experiences, on which This Paper is Partly Based. S. Ormond Goldan.
27 *The Iodin Treatment of Puerperal Sepsis. W. R. Pryor.
28 *The Treatment of Papilloma of the Larynx in Children. J. E. Summers, Jr.
29 Regicides; Sane and Insane. (Continued.) E. C. Spitzka.
30 The Treatment of the Summer Diarrhea of Children. W. C. Rucker.

26. **Relation of Anesthetist to the Patient and to the Surgeon.**—Goldan pleads for complete equality ethically, professionally, materially, between the anesthetist and the surgeon. Many surgeons, he thinks, lose sight of the fact that the anesthetist, both by education and training, is their professional equal, and he relates a number of incidents from his own experience which show the abuses that still prevail in many quarters. The only right for their existence is usage and the non-assertion of the anesthetist. Through the ignorance of the patient and many years of bad custom the surgeon assumes charge of the entire operation instead of informing the patient that he operates and others anesthetize. The anesthetist owes it to the patient and to himself that he should examine the patient before the operation. He is liable to discover valuable points in regard to the anesthesia by this examination, and the relation of the anesthetist to the patient being thus direct, he receives what he is justly entitled to and no more—the full credit for his own work and a fee accordingly. The highest medical standard, he argues, allows that the medical man is entitled to a maximum fee in every case treated. In many instances this would be a burden to the patient and, knowing this, the practitioner follows the beneficent plan of charging in keeping with the financial circumstances of his patient. In a word, he does not overcharge the rich, but he undercharges the poor. The operator, in case of a particularly important patient, labors under a greater responsibility, and he charges accordingly. The same should, and must, obtain with the anesthetist, and the signs indicate, Goldan believes, that this equality between the two is becoming recognized. In his experience the patients do not object to remunerating the anesthetist directly. When requested to send in his account to the operator he does so only as a matter of courtesy, and sees no reason why the charge should be less than if sent directly to the patient.

27. **Iodin Treatment of Puerperal Sepsis.**—Pryor found streptococci in the uterine cavity in 36 out of 37 cases examined and in the entire number these cocci were found in the serum, lymph or free pus in the posterior cul-de-sac. He is convinced that this corroborates his assumption that puerperal sepsis is the result of a streptococcic puerperal septic lymphangitis. Treatment should be along the lines of sterilization of the original lesions, and inducing absorption by the infected lymphatics of some potent, harmless antiseptic, supplemented by measures to promote the eliminative functions. He used to curette the infected uterus and open up the cul-de-sac, concluding by packing them both with an abundance of iodoform gauze "in order to drain away something." He found, however, that there was nothing to drain away except serum, and yet the cases recovered beautifully. He had builded better than he knew, and later researches have demonstrated that the fine results attained were due to absorption from the gauze. The iodoform gives up its iodin, partly in obedience to the influence of heat and partly from the chemical action of the blood serum. Local iodism is produced, and this sterilizes the pelvis, while the iodin absorbed by the lymphatics appears in the urine in an average of five hours, sometimes as early as two, showing that it has a systemic effect as well. He accompanies this massive gauze packing with saline per rectum or intravenously to facilitate the elimination of the iodin and of toxins by the kidneys. He has thus treated 37 cases; 27 had not previously been operated on, and only 1 died, while 10 had been curetted before coming into his hands and 3 died. He is now engaged on research to determine whether this local and general iodin sterilization may not be obtained through the infected lymphatics in some still simpler manner.

28. **Treatment of Papilloma of Larynx in Children.**—Summers lauds tracheotomy as the most available remedy for this condition. Intubation is a failure and the justifiability of laryngotomy is questionable. The general practitioner, he thinks, can make the diagnosis and the services of a specialist are not required.

Cincinnati Lancet-Clinic.

August 22.

31 *Eye Strain and Its Results. S. C. Ayres.
32 Eye Strain from the Standpoint of the Physician. E. W. Mitchell.
33 Eye Strain from the Standpoint of the Neurologist. Philip Zenner.
34 Surgery of Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued.) B. Merrill Ricketts.

31. **Eye Strain and Its Results.**—Ayres relates several pointed illustrations showing the physical effects possible from eye strain. One patient, a lad of 15, suffered invariably from nausea in a crowded room or on attempting to study. Another, a child of 6, suffered daily from nausea, which came on while playing and subsided when he reposed. As he did not use his eyes for reading, the influence of school life was not a factor. In another case severe choreic symptoms entirely disappeared under correction. A fourth patient was a woman of 33 who had suffered from nausea, headache and dyspepsia and had been treated for stomach trouble for five years. The relief by the adjustment of glasses was immediate and permanent. All the patients were cured of these symptoms by proper correction. Decided improvement was likewise obtained in a child of 7 presenting ametropia, muscular unbalance, nervousness and mild choreic symptoms.

St. Louis Medical Review.

August 22.

35 Diphtheria and Its Treatment. George D. Lynch.

Northwestern Lancet, Minneapolis.

August 1.

36 *Bullet Wounds in Modern Warfare. Arthur A. Law.
37 The Relation of the Medical Profession to the Enactment of Legislation on Questions of Public Health. Richard O. Beard.
38 The Function of a City Hospital. H. M. Bracken.

August 15.

39 Commercialism and the Code. J. F. Bond.
40 Enterectomy for Gangrene from Strangulated Hernia. G. R. Curran.
41 Report of a Case of Eclampsia. William F. Wilson.
42 Asepsis of the Cord. Harry Morell.
43 Pneumonia. Victor I. Miller.

36. **Bullet Wounds.**—From a study of modern high velocity military bullets, Law advises to refrain from meddlesome treatment of the wounds. Dressings should be less frequently changed on the field for fear of infection. He also notices the peculiar lack of susceptibility of the blood vessels to wounds, and the rarity of external primary hemorrhage. Lodgment of the projectile is relatively frequent, on account of the range of fire, but attempts at removal should be abstained from unless it causes trouble. Primary amputations are rarely necessary except with shell wounds or great infection. Fracture cases do as well as those in civil practice. Infection from the undeformed bullet is rare. Head wounds are among the most fatal class of cases and require most frequently operative interference. Joint wounds are among the most favorable class, and generally leave perfect function. Thoracic wounds, unless immediately fatal, recover with few complications. Tetanus and gangrene are exceptional. Abdominal perforating wounds constitute the most serious class and should not be operated on. He considers the high velocity steel-jacketed projectile as a step towards the end of all wars. It disables the enemy with the minimum of death, suffering and maiming, and impairs the subject less for future life after his return home.

American Journal of the Medical Sciences, Philadelphia.

August.

44 *Chronic Cyanosis, with Polycythemia and Enlarged Spleen: A New Clinical Entity. William Osler.
45 *An Aspect of Modern Pathology. Simon Flexner.
46 *Concerning a Possible Etiologic Factor in Tobacco-alcohol Amblyopia Revealed by an Analysis of the Urine of Cases of This Character. G. E. de Schweinitz and David L. Edsall.

47 Sitophobia, Inanition and Their Treatment. Max Einhorn.
48 *Bacteriology of the Blood. Randle C. Rosenberger.
49 *Sublingual Growth in Infants. Samuel Amberg.
50 Primary Retroperitoneal Sarcoma. Howard J. Williams.
51 *The Constitution of Normal Prostatic Secretion. Heinrich Stern.
52 *Rheumatism vs. Muscular and Joint Pains. James J. Walsh.
53 *Orthostatis Albuminuria and Movable Kidney. G. A. Sutherland.
54 *Cold as a Causal Factor in the Blood Changes Due to High Altitude. John Weinzirl.
55 Observations on a Case of Diabetes Terminating in Coma. Stuart Hart and William J. Gies.
56 A Case of Diaphragmatic Hernia; Death from Acute Distension. T. L. Chadbourne.
57 A Case of Mycosis Fungoides Symptomatically Cured by Means of X-Rays. James P. Marsh.
58 Report of Cases of Poisoning by Fruit of Ricinus Communis. W. N. Bispham.

44. **Chronic Cyanosis with Polycythemia and Enlarged Spleen.**—Osler describes a group of cases which has been elsewhere noticed by him as a new clinical entity. (See editorial, The Journal, May 23, 1903, page 1442.) He reports several other cases from the literature, and gives them a thorough analysis. He says with our imperfect knowledge of the physiology of polycythemia it would be premature to discuss at any length the pathology of this remarkable group of cases. What is needed is:

> 1. A careful study of all forms of chronic cyanosis with polycythemia, particularly those associated with heart disease and emphysema. (It is to be noted that the cases here reported have the highest blood count on record, much higher than the average in congenital heart disease or in dwellers at great altitudes.) 2. A more accurate study of the blood in this class of cases—the volume, the viscosity, the state of the plasma and the serum, the amount of hemoglobin, the specific gravity, and the diameter of the corpuscles. As increased viscosity of the blood, with resulting difficulty of flow, seems the most plausible explanation of cyanosis, it is especially important to test the viscosity by accurate physical methods and to determine the relation of the number of corpuscles to the viscosity of the blood. 3. The relation of the splenomegaly to the cyanosis and polyglobulism should be carefully observed. It man not be anything more than the effect of the chronic passive congestion. Future investigations will determine whether we have here in reality a new disease. The clinical picture is certainly very distinctive: the symptoms, however, are somewhat indefinite and the pathology quite obscure.

45. **Cytolysins, Autolysins, Etc.**—Flexner's article discusses the properties of blood serum, the study of agglutination, its relation to thrombosis, the presence of a special substance in certain venoms and poisons, such as some snake venoms and ricin, for which he proposes the name of "hemorrhagin" and looks on it as a cytolysin for endothelial cells and blood vessels. He refers to experiments by Noguchi and himself in modifying viper venom to remove the locally destructive effect and still leave the hemorrhagic principle by which immunity may be established. He next takes up the cytotoxins of blood serum, discussing them at length and also the autolysis of the organism, which he believes should be largely credited to the leucocytes.

46. **Alcoholic Amblyopia.**—Seven cases are reported by de Schweinitz and Edsall, which seem to them to point to the probability of the correctness of Horner's view that the amblyopia is due to toxemia set up by gastric indigestion and metabolism.

48. **Bacteriology of the Blood.**—After a review of the literature and a report of personal observations, Rosenberger says that bacteriologic examinations of the blood in the living may afford valuable information for diagnosis and intelligent treatment. This is particularly true in cases where antitoxic and bacteriologic sera are indicated. Special care as to technic is a pre-requisite; special media should be used in certain cases, as in gonococcal infection, etc. Postmortem examination of the blood should not be relied on to determine the nature of the infection as the results are often misleading and untrustworthy. In enteric fever in 535 cases the typhoid bacillus was shown to be present in the blood in over 80 per cent. Schottmüller's plea that all cases of enteric fever should be regarded as bacteriemias seems justifiable, as observers agree that bacteria can be found in the blood before a positive Widal reaction. This fact would seem to place this procedure as a diagnostic method in advance of the other and also seems to prove that the disease is often, if not always, a blood infection. He also considers that proper identification of the bacteria present in septic processes would reconcile discordant views as to the therapeutic efficacy of the antistreptococcic sera. He thinks there is also a possible future for bacteriologic examination of the blood as an aid in the diagnosis of tuberculosis and syphilis.

49. **Sublingual Growths in Infants.**—The first case apparently reported in an American in this country is detailed by Amberg, who discusses the condition, which has been observed in Southern Italy under the name of Riga's disease. The growth under the tongue is undoubtedly a product of an inflammatory process. Its etiology, however, is obscure; the bad hygienic conditions of the mouth may be of importance. The idea, however, that the sublingual growth is an integral part of a definite serious disease does not seem well supported. It is likely that not all affections of the frenulum included under this head are of uniform pathologic character. The diagnosis is easy and the prognosis generally favorable.

51. **The Prostatic Secretion.**—Stern gives a careful analysis of the prostatic secretion, including a special enzyme which has been discovered in it, and shows that it is as yet impossible to single out the specific importance of the prostatic fluid. Possibly it is due to its enzyme exhibiting coagulating properties; maybe to the phosphorus containing lecithin or maybe to some of the nucleoproteids whose importance has still to be determined or to a combined action of any or all of them or to some other factor altogether. There is no doubt, however, as to its physical importance as a vehicle for suspension and the preservation of the spermatozoa. The secretions, however, of other organs, of course, assist, and he thinks it will not be far from the truth in assuming that apart from an eventual specific chemico-enzymic potency, the secretion of the prostate gland is of importance in overcoming the quiescence of the spermatozoa, and in effecting that state of osmosis in the seminal fluid which is essential to fecundation.

52. **Rheumatism vs. Muscular and Joint Fatigue.**—Walsh points out that many cases diagnosed as rheumatism are really cases of muscular fatigue, and shows how this may occur in scoliosis and in hysterical and tubercular joints and in the lungs where the pains are likely to be considered pleuritic. The matter is of importance since the use of depressing antirheumatic remedies is contraindicated in these cases. The treatment of the latter group consists not in the use of analgesics, especially the coal-tar products, but of gentle rubbing and massage and of limitation of exercise of the patient so as to prevent the overuse of respiratory muscles that is sure to be called for if, with one lung practically at rest, the patient attempts any of the ordinary efforts that before were so easy of accomplishment. Resting the parts and tonic treatment are almost always of benefit in all these cases, or exercises to equalize the strength of the muscles.

53. **Orthostatic Albuminuria.**—This condition, which has been described as cyclic albuminuria, albuminuria of adolescence, etc., is discussed in its relation with movable kidney by Sutherland, who reports 15 cases. All of them, he thinks, occurred in patients with a lowered vascular tone and probably venous congestion in the kidneys, altered nutrition and glomerules producing albuminuria. Displacement of the kidney aids the process and the cessation of albuminuria in the reclining posture is best explained by the restoration of the kidney to normal position in this attitude. He mentions that he has met with more cases of movable kidney among forty cases of orthostatic albuminuria than among all the other patients examined at a children's service during fifteen years (15 in 40 cases).

54. **Cold and Blood Changes.**—Weinzirl some time before called attention to the fact that the increased counts of red corpuscles at high altitudes are temporary, and suggests that the temperature may have much to do in their production. He reports experiments on rabbits taken out of a warm basement and carried to a cold temperature and their blood examined. He offers in conclusion the following:

> 1. Cold is an important factor in accounting for the blood changes due to high altitude. That cold is the only factor, however, is not maintained. 2. In general the specific gravity, the hemoglobin, and the volume of cells follow the increase or decrease of the red blood cells, although this is not invariably the case. 3. Although the data are too few for a final conclusion, there is no evidence that

a decrease in the size of the cells accompanies an increased cell count. The contrary, however, is indicated, and this factor probably varies directly with the others.

Medicine, Detroit.

August.

59 Adenoma and Angioma of the Kidney and Some Allied Tumors. W. Ramsay Smith.
60 *An Attempt to Obtain a Uniformly Active, Sterile and Non-Irritating Preparation of Digitalis for Subcutaneous and Internal Administration. E. M. Houghton.
61 Case of Perforating Ulcer of the Duodenum; Operation Thirty-two Hours After Perforation; Death from Peritonitis. Bayard Holmes.
62 A Case of Amebic Dysentery in Illinois, with Special Reference to Acetozone Treatment. Russell L. Kurtz.
63 Congenital Sincipital Encephalocele. Mortimer Frank.

60. **Digitalis.**—Houghton describes the experiments made in testing a new non-alcoholic digitalis preparation, for which he claims the following advantages: It does not produce pain or irritation at the point of injection. It is readily absorbed and produces typical digitalis action when given per rectum, internally, hypodermically or intravenously. It is aseptic and remains so if the container is kept stoppered, and is convenient and ready for immediate use, either internally or hypodermically, without dilution. The paper gives illustrations and tables of the experiments.

Journal of Nervous and Mental Disease, New York.

August.

64 *Myoclonus Multiplex and the Myoclonias; Report of Cases and an Attempt at Classification. Charles L. Dana.
65 Chronic Progressive Hemiplegia, with Remarks on Two Cases of Unilateral Paralysis Agitans without Tremor. Hugh T. Patrick.
66 The Work of a Neurological Dispensary Clinic. Smith Ely Jelliffe and L. Pierce Clark.

64. **Myoclonus Multiplex.**—Dana groups myoclonus under the head of:

> 1. Myoclonia of Friedreich, or peripheral type, including myokymia. 2. Myoclonia of the functional or hysterical type. 3. Myoclonia of the convulsive tic type, this last type being characterized by many associated spasms, choreic and tonic. 4. Myoclonia of the degenerative chorea or "familial," or myoclonus-epilepsy type, which is closely related with the third. 5. Myoclonia of the type of the infectious and symptomatic choreas. Although there is sometimes a mixture or fusing of the above groups, they are essentially different disorders and, as a rule, can all be easily recognized and easily distinguished from each other. All cases of paramyoclonus multiplex reported as such can be grouped in one or the other. Hence there is no need of that much misused term.

Four cases are described representing each of these types. He reproduces the account of the original case of paramyoclonus multiplex of Friedreich.

Journal of the Michigan State Medical Society, Detroit.

August.

67 The Surgeon: His Opportunities and Responsibilities. Frederick W. Robbins.
68 Fibromata as Complications of Pregnancy. Reuben Peterson.
69 Obstetrics in General Practice. F. A. Grawn.
70 *Excision of Hemorrhoids. William L. Dickinson.
71 Prevention of Gynecic Evils. J. A. Porter.
72 Bilateral Cystic Disease of the Kidneys. H. E. Randall.

70 **Hemorrhoids.**—Dickinson's method of treating hemorrhoids is, in the case of external piles, to make them as nearly aseptic as possible and then to inject a 5 per cent. solution of nirvanin. Then grasping with the forceps, the hemorrhoid is elevated well up and with scissors curved on the flat, the tumor is cut off close to its base. The base is curetted in order to remove every vestige of the hemorrhoid. The hemorrhage is usually slight and controlled by pressure; if not, hemostatic forceps can be used for a few minutes. When it has stopped, the two sides of the incision can be united with fine catgut, dusted with iodoform and a sterile gauze pad applied and held in place by a T-bandage. It is well to keep the patient recumbent for a few days until the parts are healed. In case of internal hemorrhoids, he operates by dilating the sphincter and applying four Platt's T-forceps, pulling down and outwards with the aid of two assistants, exposing the mucous membrane of the bowel for the distance of an inch or an inch and a half. Each internal hemorrhoid in turn is grasped by forceps, elevated as much as possible and cut off with the scissors, curved on the flat, the long diameter of the incision longitudinal to the bowel. The base of each hemorrhoid is curetted and the hemorrhage stopped with a hot water compress; then dust the parts with orthoform, iodoform and boracic acid. The T-forceps are removed and the lower end of the rectum is packed with a strip of iodoform gauze, two inches wide and two or three yards in length, which has been lubricated with sterile vaselin. The latter makes it easier to remove. It should be removed in twenty-four hours if the patient complains, but as a rule not until after forty-eight hours. When it is removed, hydrogen dioxid should be injected, thus loosening the gauze, and a stream of warm sterile water is allowed to flow over the part. The rectum is daily irrigated with sterile warm water and then injected with half an ounce of olive oil, containing five grains of iodoform. The patient's bowels are moved on the third day by magnesium sulphate. It is not necessary to suture internal hemorrhoids, and when treated in this way they are not very painful. The patient is confined to bed only about a week. The pad and T-bandage are used and make it more comfortable for the patient. He has never had a case of secondary hemorrhage when operating by this method.

The Physician and Surgeon, Detroit and Ann Arbor.

May.

73 *The Choice of Methods in the Treatment of Cancer. G. Betton Massey.
74 *The Necessary Co-operation of Heredity and Bacteriology in the Production of Disease. Owen C. Brown.
75 *The Climatologic Treatment of Tuberculosis. Ethan H. Smith.
75½ Daily Study of Foods Producing or Not Producing Casts, Fatty Epithelia and Albumin in Urine. (Continued.) Ephraim Cutter.

73. **Cancer.**—Massey claims that the massive cataphoric diffusion of mercury under general anesthesia is the most satisfactory way of reducing an accessible growth. The nascent oxychlorids of mercury and zinc are dissolved from electrodes thrust within the growth, causing immediate, sterile necrosis of the growth proper, and sufficient dispersion of the germicidal salts beyond its apparent limits to sterilize the surrounding tissues for an inch or more. All the morbid cells are killed *in situ*, those in the growth coming away as an inodorous slough, while the cells in the surrounding sterilized zone are absorbed as débris. When it is understood that this can all be done in one-half to two hours with practically no after discomfort, he considers we have in it an ideal method for the eradication of the cancer. The choice between this method and the *x*-ray is important in inoperable cases. As a general rule, he thinks the combination of the two methods is desirable, the cataphoresis first, followed by the *x*-ray as soon as the slough comes away, which is in one to three weeks. The destruction and aseptic removal of the growth enables the deeper penetration of the *x*-rays, and prevents the absorption of toxins during the radiation of large growths. In inaccessible cancers, such as those in the nose, mouth, vagina, uterus or rectum, the cataphoric method will have to be depended on alone as a rule.

74. **Heredity and Bacteriology.**—The object of Brown's paper is to show the co-operation of heredity and bacteriology in the production of disease. He assumes a double tendency in all living beings to variation on the one hand and to conservatism on the other, the latter being what we know as heredity. These tendencies apply equally to disease. They may be dormant in the system for generations. Certain attributes, developments and diseases common to both sexes and certain functions may be arrested by the development of functions peculiar to each sex. They may reappear in the offspring, or be reawakened when the functions of development that had arrested their growth have discontinued their activity. Diseases following developments of structure caused by increased functional activity are as readily transmitted as such increased structural developments. Bacteriology is concerned with environment; bacteria can not be the sole producers of disease. Heredity and bacteriology are mutually dependent and must co-operate if they are to become active in the production of disease.

75. **Tuberculosis.**—Smith criticises the various climates of the mountainous regions of the west, holding that the altitude in some is too high, while others are too dusty and liable to excessive range of temperature, storms, etc. In Arizona, for example, the conditions are poor for a large class of cases. In California, he thinks the climate has a large range. Some

parts are good for one class and others for others. Many patients receive benefit from traveling with a camp wagon from north to south, and *vice versa*, according to the season. He has known, however, of pulmonary tuberculosis patients going to Alaska and returning well. In all these cases the patients had a good digestion. Where the digestion is impaired the case is hopeless. He insists in conclusion on the importance of fresh air and open-air life. The latter, in tents, is possible for almost any tuberculous patient the year around.

American Gynecology, Baltimore.

July.

76 *Uretero-cystostomy. J. Wesley Bovée.
77 *Indications for and Most Satisfactory Methods of Bringing About Premature Labor and Accouchement Forcé. J. Whitridge Williams.
78 *Should the Uterus Be Removed When the Ovaries and Tubes Are Removed in Cases of Double Pyosalpinx, When Operating Through the Abdomen? Matthew D. Mann.
79 *An Operation for Retroversion: Cuneiform Shortening of the Broad Ligaments. Harris A. Slocum.
80 *The Condition of the Pelvic Lymphatics in Carcinoma of Uterus.. Emil Ries.
81 The Electrothermic Angiotribe in the Removal of a Large Suppurative Tubo-ovarian Mass, with Resection of Four Inches of Colon and End-to-end Anastomosis. Andrew J. Downes and J. M. Fisher.
82 *Should the Uterus Be Removed When the Ovaries and Tubes Are Removed in Cases of Double Pyosalpinx, When Operating Either Through the Abdomen or Vagina? Charles P. Noble.

76.—See abstract in The Journal, xl, p. 1597.

77. **Accouchement Force.**—Williams would not employ premature delivery in cases of deformed pelves, but would rather let them go to term and then, if necessary, perform cesarean section as safer both for the mother and child. In cases of toxemia of pregnancy, eclampsia and placenta previa he considers accouchement forcé indicated, and in eclampsia it is imperatively demanded both theoretically and by practical experience. His experience with eclampsia numbered 30 cases, and the conclusions are briefly summarized as follows:

> If the cervix will admit one finger or can be readily dilated sufficiently to do so, accouchement forcé by Harris' method, using the fingers, is a safe and justifiable procedure, if effected slowly. If the cervix is cartilaginous in consistency and apparently offers an insuperable obstacle, it would be more conservative in hospital practice to resort to cesarean section, while in private practice better results will be obtained by palliative treatment rather than by attempting immediate delivery.

In the toxemia of pregnancy he has had to resort to the method in 13 cases, and concludes that in such the pregnancy should, if possible, be terminated by the employment of the bougie or Champetier de Ribes' bag, accouchement forcé being reserved for the very exceptional cases in which danger of the onset of eclampsia is so imminent that very rapid delivery is urgently indicated. In placenta previa he thinks if the child is viable and in good condition and the parents are particularly desirous of saving it, Champetier de Ribes' balloon may be introduced and complete dilatation of the cervix obtained by making traction on it either by means of the hand or a weight. However, this is slightly more dangerous to the mother than bipolar version. In 34 cases accouchement forcé was undertaken for the sake of the child or mother in patients who were already in labor, the indications being hydramnios, pyelonephrosis, intense cystitis, one each, danger to the fetus as shown by sudden change in the pulse rate, or prolapse of the cord in 7 cases, and in 24 very prolonged labor as manifested by exhaustion and marked and persistent elevation in maternal pulse rate or fever. All of the mothers recovered while 28 per cent. of the children perished. He thinks after labor has set in, excepting in cases of placenta previa, accouchement forcé may be undertaken with comparative impunity whenever imperatively necessary. Only 3 deaths occurred in his 87 cases that might be attributed to the operation. Two of these were due to rupture of the uterus, 1 from infection, and there were 7 others where deep tears of the cervix required an immediate operation to control the hemorrhage. He does not believe in the Bossi method of dilatation excepting in very experienced hands, and with Harris' method he cautions against going too fast, as is the tendency. Better results will be obtained by prolonging the operation.

78. **Hysterectomy.**—The question whether the uterus should be removed with the tubes and ovaries is treated of by Mann, who thinks that when the tubes and ovaries have been removed the uterus is unimportant to the patient and she is better off without it. He does not think there is much sentimental feeling in regard to its removal. He ends with quoting Henrotin's dictum: "In any operation for septic conditions of the female generative organs which demand the removal of the tubes and ovaries, hysterectomy should also be performed unless there are contraindications forbidding it."

79. **Shortening of the Round Ligaments.**—The title of this article explains itself, but the details can best be understood by reference to the illustrations. Various methods, such as taking out a wedge-shaped piece from the broad ligaments, buttonholing them, etc., are fully illustrated, there being many modifications according to the needs of the case. He, however, suggests for the whole class of cases the title "Cuneiform shortening of the broad ligaments."

80. **Pelvic Lymphatics.**—Ries proposed the removal of the pelvic lymphatics in case of cervical carcinoma as early as 1895, and has employed the procedure since that time. He finds a number of conditions associated with carcinoma in these glands, and describes the various stages of their invasion by malignant growth. Glandular carcinoma is frequently associated with other conditions, not necessarily always connected with carcinoma, such as the production of epithelial ducts in the lymphatic gland, which he described in his first case operated on. He thinks they may possibly be due to remnants of the Wolffian body embedded in the lymphatics on the posterior pelvic wall. Another condition observed was large cell hyperplasia, which may also occur in tuberculosis, and even in other conditions. He thinks it represents a condition of growth with the nature of which we are not thoroughly familiar. He has also found hyaline degeneration of the connective tissue trabeculæ associated or otherwise with carcinoma, and has frequently found typical hemolymph glands. He believes in the reformation of lymph glands after they have been destroyed or removed, and that they may occur anywhere in the connective tissue. The hemolymph glands, with their direct connection with the blood currents, afford a new explanation of how carcinoma may form metastases.

82. **Hysterectomy.**—Noble's opinion in regard to the removal of the uterus in case of pus tubes is similar to that of Mann. He points out the superiority of the operation over removal of the uterine appendages alone.

Medical Review of Reviews, New York.

July 25.

83 *A Clinical and Bacteriologic Study of a Number of Outbreaks of Dysentery in which "Dysentery Bacilli" Were Found. William H. Park, Edward K. Dunham and H. M. Carey.

83. **Dysentery.**—Park, Dunham and Carey give the results of their study of the dysentery bacillus, from which they have deduced the following conclusions: At least two distinct varieties of bacilli are found in the intestines of those suffering from dysentery and colitis which have not as yet been met with in other conditions. They differ from each other in certain cultural characteristics (indol formation and mannite fermentation), and also in their agglutinating reaction. Different cultures made at widely separated places, though agreeing in their agglutinating reaction with most sera, still differ from each other when tried with various normal animal sera. Though Martini and Lentz are right in their statement that the Shiga type differs from Flexner's Manila Baltimore type in cultures and agglutinative reaction, yet they seem to be altogether wrong in concluding that any one type is more a factor in dysentery than the other. Indeed, the Deycke bacilli from Constantinople dysentery, which approached the colon type in cultural characteristics, can not be overlooked. The authors think it probable that Shiga, if he carries his cultural and agglutinative tests as far as necessary, will find that not one but several varieties are present in the intestines of different and perhaps the same patients in Japan as well as in the United States. The use of more accurate agglutinative tests along with additional culture media has shown that in different epidemics the bacilli found vary so greatly from the

Shiga cultures that it can hardly be determined whether or not it can be brought within one single dysentery group.

Canada Lancet, Toronto.

August.

84 *Surgical Treatment of Nephritis. Alexander H. Ferguson.
85 *The Washing Out Plan; the Good It Fails to Do; the Harm It Does. Alexander Haig.
86 Rational vs. Empirical Therapeutics. J. O. Todd.
87 The Medical Witness Under Examination. W. R. Riddell.
88 Appendicitis from the Standpoint of the Country Doctor. John W. S. McCullough.
89 Contagious Diseases in Their Economic Relationships. P. H. Bryce.

84.—This article appeared in THE JOURNAL of July 4, p. 8.

85. **The Washing-Out Plan.**—Haig protests against the adoption of the washing-out plan in nephritis and other conditions, especially those of uric acid disease. He thinks in Bright's disease the better treatment is the cutting off of all fluids, putting the patient on even as little as a half pint of fluid in twenty-four hours. He calls the idea of washing out the system silly and unphysiologic.

Proceedings of the Pathological Society, Philadelphia.

June.

90 A Museum Jar, with Improved Devices for Sealing and Labeling. W. M. L. Coplin.
91 Cystic Degeneration of the Mamma, Showing Transformation into Scirrhous Carcinoma. A. G. Ellis.
92 Hemorrhagic Gastritis Due to Pyloric Lodgement of Swallowed Laryngeal Pseudomembrane. A. G. Ellis.
93 Heart Showing Chronic Tuberculosis of the Pericardium, with Involvement of the Myocardium. A. G. Ellis.
94 A Series of Specimens: Adrenals Containing Cells Resembling Those of the Liver, etc. Randle C. Rosenberger.
95 Ovarian Dermoid Containing Thyroid-gland Tissue. Brooke M. Anspach.
96 History and Postmortem Notes from a Case of Gallstones. M. H. Fussell.

Denver Medical Times.

August.

97 The Animal Suture; Its Value in Aseptic Surgery. Henry O. Marcy.
98 Three Cases of Nerve Destruction in the Eye Treated by Hypodermic Injections of Strychnia. Henry La Motte.

Medical Herald, St. Joseph, Mo.

August.

99 Code of Ethics, A. M. A., Adopted at the New Orleans Meeting.
100 Raising the Standard for Medical Students and Physicians. W. S. Thompson.
101 Treatment of Diarrhea of Adults. George H. Candler.
102 Diagnosis of Diastolic Heart Sound. LeRoy Crummer.
103 The Diagnosis of Gallstones. A. L. Wright.
104 Report of Uses of X-Ray in Chronic Eczema, Acne, Cancer, etc. W. L. Kenney.

Medical and Surgical Monitor, Indianapolis, Ind.

August 15.

105 Cesarean Section on a Dwarf Four Feet Two Inches in Height. W. H. Link.
106 Consumption and Its Relation to Life Insurance. Allison Maxwell.
107 *Excision of Hemorrhoids. William L. Dickinson.
108 A Case of Noma Complicating Typhoid Fever. A. H. Caffee
109 Treatment of Acute Dysentery. W. Byford Ryan.
110 A Practical Note on the Use of Adrenalin Chlorid in Operations for Adenoids. J. F. Barnhill.
111 Hemorrhage of Typhoid Fever Treated by Calcium Chlorid. Samuel E. Earp.

107.—This article has appeared elsewhere. See abstract 70 above.

International Medical Magazine, New York.

August.

112 Some Cases of Infant Feeding. Alfred Hand, Jr.
113 Treatment of Epilepsy. Luther C. Peter.
114 Disturbances of the Vasomotor Mechanism as a Factor in Diagnosis and Therapeutics. John P. Arnold.
115 Treatment of Eczema. George P. Katzenstein.
116 Rupture of an Aneurism of the Thoracic Aorta. M. H. Fussell.
117 A Case of Cerebral Abscess. George C. Stout and Herbert Fox.
118 Note on the Place of Sugar in the Diet of Dyspeptics. Boardman Reed.

Merck's Archives, New York.

August.

119 The Rôle of Lecithin in Pathology and Therapeutics. Horatio C. Wood, Jr.
120 Rhus Toxicodendron and Rhus Poisoning. (Continued.) J. M. French.
121 An Index of Diseases Alphabetically Arranged, with Their Modern Treatment. G. Bjorkman.

Louisville Monthly Journal of Medicine and Surgery.

August.

122 Digitalis. John G. Cecil.
123 Cardiac Tonics: Indications and Contraindications, with Special Reference to Digitalis. Thomas Hunt Stucky.
124 Some Uses of the Suprarenal Extract in Eye, Ear and Throat Practice. Samuel G. Dabney.
125 A Rapid Method of Blood Examination for the General Practitioner. F. H. Montgomery.
126 The Significance of Albuminuria. Orville A. Kennedy.

Medical Summary, Philadelphia.

August.

127 Treatment of Sunstroke. L. G. Doane.
128 Fistula. George J. Monroe.
129 Dysentery. J. A. Burnett.
130 A Report of Cases (Sciatica, etc.). Louis J. Pons.
131 Diagnosis; an Illustration. William H. Burgess.
132 Grindelia Robusta; Best Way to Use Quinin, etc. J. A. Burnett.
133 Podophyllum Peltatum. Andrew J. Mann.
134 Astringents in Summer Complaint. William F. Waugh.
135 Iron and How I Use It. Ben H. Brodnax.
136 Preventive Medicine. Silas Hubbard.

Medical Bulletin, Philadelphia.

August.

137 Paralysis Following Typhoid Fever; Tobacco Poisoning. John V. Shoemaker.
138 Suppuration of the Antrum of Highmore. E. B. Gleason.
139 Cesarean Section Indicated in a Face Presentation with Chin Directly Posterior. W. Frank Haehnlen.
140 The Treatment of Some Phases of Gastritis. George W. Pfromm.
141 Malignant Endocarditis. Albert E. Roussel.

Atlanta Journal Record of Medicine.

August.

142 The Prevention of Diarrheal Diseases in Infants. Robert W. Hynds.
143 Report of Interesting Operative Cases at Presbyterian Hospital. E. C. Davis.
144 The Action on Mucous Membranes of Silver Salts, with Especial Reference to Some of Their New Organic Forms. Arthur G. Hobbs.
145 Phrenology and Life Vocations. E. G. Ferguson.

Memphis Medical Monthly.

August.

146 Medical Organization and the Mission of the County Medical Society. James S. Rawlins.
147 Malignant Diseases of the Larynx. Richmond McKinney.
148 Therapeutic Value of the Roentgen Rays. William Krauss.
149 Traumatic Meningitis. Robert W. Tate.
150 Treatment of Menstrual Derangements. J. Smithline.
151 Malarial Hematuria. W. S. Robinson.

New England Medical Monthly, Danbury, Conn.

August.

152 *The Erotopath in Society. Charles H. Hughes.
153 Practical Experiments in the Treatment of Anemic Conditions. Fritz Euler-Rolle.
154 Investigations of Antistreptococcus Serum. F. Meyer and L. Michaelis.
155 *Medical Education in the United States. Frank Billings.
156 A Novel and Efficacious Method of Treatment in a Case of Typhoid Fever. Honore J. Cote.
157 On the Disinfectant Value of Kresamin (Ethylendiamine-trikresol) and Its Therapeutic Employment in Diseases of the Skin. Heinrich Eckstein.

152.—This article has appeared elsewhere. See THE JOURNAL, xl, title 66, p. 738.

155.—This article appeared in THE JOURNAL, xl, p. 1271.

Oklahoma Medical News, Oklahoma City.

August.

158. Etiology of Arthritis Deformans. H. B. Decherd.
159 Vesico-Vaginal Fistula. A. K. West.
160 Gonorrhea in the Female. G. W. Taylor.
161 Dysmenorrhea. Y. S. M. Roberts.

Occidental Medical Times, San Francisco.

August.

162 Some Clinical Chest Cases, with Fluoroscopic Reports. C. Miner Cooper.
163 The Treatment of Thoracic Aneurism by the Introduction of Wire and Galvanism, with the Report of a Case. Raymond Russ.
164 Indications and Counterindications for Prostatectomy. Louis Bazet.
165 Acute Suppurative Osteomyelitis. Emma S. Merritt.
166 Ascites Due to Syphilitic Cirrhosis of the Liver Treated by Epiplopexy. (Continued.) Minora E. Kibbe.
167 Homo Delinquens. Knud Pontoppidan.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

The Lancet, London.

August 15.

1 *The Causes, Prevalence and Control of Pulmonary Tuberculosis. (Continued.) H. Timbrell Bulstrode.
2 *Infantile Scurvy. W. S. Colman.
3 *The Action of Hemolytic Sera. Robert Muir.

ing of a fracture. In 41 the cure was complete; in 6 nearly so; in 8 there was marked improvement, and in 3 slight improvement. In only 7 cases were the results negative. In 3 the outcome was not known. This is a proportion of cures or improvements in 58 cases, or 85.3 per cent. Intervention should be early, although excellent results have been obtained even at a late date. If neuritis develops or a sclerous perineuritis, the longer the delay the more serious the resulting injury of the nerve. Another reason for operating early is the progressive atrophy of the muscles, stiffness of the joints and trophic disturbances which constantly progress. It is advisable to undertake massage and exercises of the joints when first seen, without waiting for the operation. A long interval elapses after intervention before any result is apparent. Usually from four to six months passes before restoration of function, after either liberation or suture of the nerve. The patient should be warned that he will not note any difference before six months, and even later than this, success should not be despaired of. Polaillon's patient was operated on six weeks after the injury, but voluntary movements were not possible until two years later, and the arm then regained its normal strength. Blencke's personal case seems to be a remarkable exception to this rule. On account of a typical radial paralysis, four months after the fracture the nerve was exposed. It was found encased in cicatricial tissue, which pressed it against a projecting point of bone. It was liberated and the surface of the bone leveled, with almost complete restoration of function in forty days. The operation should remove all traces of the fibrous sheath, cicatricial tissue or bone growth encroaching on the nerve. The bony canal in one case was 5 cm. long, in another 4 cm. In Blencke's statistics the nerve was torn across in 12 cases; in 10 it was sutured, with complete success in 7 and improvement in 2 others. Restoration of function was complete after two months in 1 case; after seven in 1; nine in 1; ten in 2; a year and a half in 1, and two years in 1. Trendelenburg found the gap between the stumps too long for suture in 3 cases, and brought them together by shortening the humerus. In one instance the gap was 7 or 8 cm., and he resected 5 cm. of the bone "en escalier"—staircase fashion, after which the bone and nerve could be sutured without difficulty. Function was restored after ten months. In the 2 others the nerve was not torn, but was so degenerated that a segment of 4 to 6 cm. was excised. The results were equally fine in one case, but sufficient time has not elapsed in the other for complete restoration. Wölfler has reported a similar operation with no benefit nearly three months afterward, but complete motor restoration was realized by the end of the second year. The cicatricial focus must be excised, as recurrence is liable. Wölfler had to operate three times on one of his patients. Final success was attained after enveloping the nerve in strips of epidermis taken from the thigh. Launois does not approve of the introduction of a foreign body to protect the nerve, believing that better results will be obtained by extensive extirpation of the cicatricial focus. Ollier used to advocate detaching a strip of periosteum where the bone approaches the nerve. It may be advisable to level the bone or chisel a groove in it. Reisinger has in 2 cases sucessfully transferred the nerve to a groove in the soft parts. In one instance he cut a flap in the triceps and brought it down over the nerve, in the other he hollowed out a groove in the muscle and, after placing the radial in the groove, sutured the two edges above it. There was suppuration in one case with expulsion of several sequestra, but by the end of eleven months functional restoration was complete.

20. Occlusion of Intestine from Kinking of Left Angle of Colon.—Berard and Patel have observed at Lyons a case of occlusion of the intestines caused by sinking down of the colon each side of the left angle, which was held in place by the ligaments. As the gut droops the angle, instead of being rounded, becomes sharp and the gut folds on itself, almost or entirely closing the lumen. The lesser the width of the suspending ligament the sharper the angle becomes. Pain at the seventh or eighth rib seems to be the only sign which indicates an obstruction at this point. If the occlusion is not total, injections of oil and other medical measures may relieve, and the symptoms sometimes subside after a copious evacuation of the bowels. To avoid recurrence, the stools should be regulated, and as there is usually general enteroptosis and nephroptosis a large, double, well-fitted Glénard belt may be found useful. In one of the two personal cases described this belt is proving a true medical colopexy, removing all disturbances from this cause. In case of a laparotomy for occlusion if no neoplasm or constricting bands are found, this essential occlusion at the splenic angle should be thought of. When discovered it may be cured by lateral entero-anastomosis or colopexy, or both combined. Two other cases found in the literature are also cited.

21. Treatment of Wounds of Diaphragm.—Whenever there is a probability that the diaphragm has been involved in a wound, it should be opened up through the thorax and the wound sutured. By this simple intervention hernia later is prevented. Lenormant has thus treated 2 patients and tabulates 8 others treated by a laparotomy and 21 operated on by way of the pleura like his own cases. There were 5 deaths in the first group and only 3 deaths among the 23 in the second group. He gives the details of the entire list of 31 cases.

22. Idiopathic Dilatation of Large Intestine.—Duval is prosector at Paris and his extensive monograph is concluded from the March and April numbers. He has collected 48 cases of Mya's congenital megacolon, Hirschsprung's disease, or idiopathic dilatation of the large intestine as it is variously called, including some that have been published in this country. In 4 the condition was congenital and in 38 it dated from early infancy. In 5 only it was noted later, at the age of 15, 24, 32 or 50 and "in an adult." The colon in Formad's case contained 47 pounds of fecal matters; in Fütterer's the colon measured 66 cm. in circumference and had a capacity of 16 liters. Medical treatment should be perseveringly attempted, large daily injections carried into the colon and purgatives avoided except possibly oil. Electricity and massage may be useful, but only one case is on record in which daily stools were obtained by these measures. Hirschsprung reported benefit after six months. Failures are frequent. In the 15 cases in which surgical intervention was attempted 4 deaths occurred. Colopexy proved successful in 2 out of 4 cases in which it was tried, colectomy in 2 out of 5, and colostomy in 2 out of 4.

26. Method of Reaching Abscess in Liver.—Mendes reports a case cured by evacuating the abscess in the liver by a parapleural transdiaphragmatic operation. He recommends this method as allowing perfect drainage while absolutely avoiding immediate pneumothorax and infection of the peritoneum. He turned back a flap of bone and soft parts corresponding to the seventh interspace, and then resected the eighth and ninth ribs. The pleura was detached and pushed out of the way and the exposed diaphragm was incised for 5 cm., allowing the escape of 423 gm. of pus. The parts were swabbed and two large drains carried into the focus. The drains were expelled by the ninth day and the last traces of the wounds healed in less than a month.

29. *Actinomycosis of Liver.*—Auvray states that potassium iodid has failed to benefit the cases of actinomycosis of the liver that have been published, but still it should always be given a trial, using as much as 6 to 10 gm. a day. In 6 cases an operation was undertaken, in 4 a laparotomy, a lumbar incision in 1, and through the thorax in another. None of the patients were saved.

Beitraege Zur Klin. Chirurgie (v. Bruns'), Tuebingen.

Last indexed XL, page 288.

34 (XXXVII, 1-2, Esmarch Festschrift.) *The Wounded in the Wars of the Fifteenth and Sixteenth Centuries. C. Brunner. —Die Verwundeten der alten Eidgenossenschaft.
35 *Curvature of Leg After Resection of Knee in Children. F. Hofmeister.—Die Verkrümmungen des Beines nach Kniegelenksresektion im Kindesalter.
36 *Involvement of Appendix in Hernia. B. Honsell.—Isolierten Brucheinklemmung des Wurmfortsatzes.
37 *Primary Cancer of Extremities. M. v. Brunn.—Ueber den primären Krebs der Extremitäten.
38 *Relations Between Suprarenals and Growth. P. Linser.—Beziehungen zwischen Nebennieren und Körperwachsthum, besonders Riesenwuchs.

39 Fibroma in Jaw. C. Blauel.—Ueber zentrale Kieferfibrome.
40 *Pseudo-Appendizitis. H. Küttner.
41 *Healing of Tendon Wounds and Defects. R. Seggel.—Histologische Untersuchungen über die Heilung von Sehnenwunden und Sehnendefekten.
42 * [illegible] Unpedunculated Skin Flaps. W. [illegible] von ungestielter Hautlappen.
43 * [illegible] H. Lindner.—Zur Magendarmchirurgie.
44 *Resection of Large Intestine at Several Sittings. Goeschel.—Mehrzeitige Resektion des Dickdarms.
45 Zur Pathologie und Therapie der Revolver-Schuss-Verletzungen. Ossig (Breslau).
46 Plastic Operations for Defects in Skull. v. Hacker.—Ersatz von Schädeldefekten durch unter die Kopfschwarte verschobene und umgeklappte Periost-Knochen-Lappen bezw. Periost-Lappen.
47 Zur Technik der Operation grösserer Hämangiome und Lymphangiome. W. Müller.
48 Serofibrinöse Peritonitis nach akuter Enteritis, durch Laparotomie geheilt. O. Langemak.
49 Invagination of the Appendix. D. Ackermann.—Ueber die Umstulpung des Processus vermiformis und ihre Beziehung zur Intussuszeption.
50 Cyst-Formation in *Tumors.* E. *Ehrich.—Ueber glattwandige* frische Cysten in Geschwülsten.

34. The Wounded in the Wars of the Fifteenth and Sixteenth Centuries.—Brunner's article is a comprehensive illustrated, historical review of the treatment of the wounded and of military medical and surgical affairs generally in the various campaigns of Europe before 1600. His facts and illustrations are derived from old chronicles, paintings, frescoes, stained glass windows, etc., and form a most interesting portrayal of the conditions then prevailing. The wounded were abandoned to the conquerors. The first attempt to depart from this barbarous practice seems to have been by the Swiss at the battle of Marigniano during the early part of the sixteenth century. In their defeat they carried their wounded away with them.

35. Curvature of Leg After Resection of Knee in Children.—Hofmeister was able to examine 107 of his little patients from one to seventeen years after resection of the knee. He found severe curvature of the leg in 44 per cent. and medium in 72.7 per cent. Only 16.8 per cent. were absolutely and 27.1 comparatively straight. The tendency to curvature diminished with the age of the subject. Between 3 to 8 the percentage was 64.6 per cent. of severe curvatures, while from 9 to 13 it was only 27.2 per cent. He attributes the curvature and physiologic weakness of the bones to the weight of the body and the traction of the flexor muscles. Prolonged after-treatment is necessary in prevention, and he believes that it would be advisable to detach the flexor muscles from the thigh when knee resection is undertaken on children under 8.

36. Isolated Involvement of Appendix in Hernia.—Honsell has observed 4 and collected 79 cases of this condition in the literature. He advocates removal of the appendix under these circumstances, even if sound, as it is liable to be injured and entail appendicitis later.

37. Primary Cancer of the Extremities.—Brunn reports from Tübingen a number of cases, bringing the total statistics of the clinic to 46 cases, with 35 per cent. permanent recoveries. Metastasis in the lymph glands is rare, but still sometimes occurs. Several inoperable recurrences were due to this cause. Most of the cancers developed on a chronically inflamed soil, but a few after a single trauma. The right upper extremity was the most frequent site. The number of permanent recoveries is about the same after mutilating and conservative operations, if the successfully operated recurrences are included. He reviews in conclusion 145 cases not included in Volkmann's statistics.

38. Relations Between the Suprarenals and Growth.—Linser argues to prove that the thyroid, hypophysis, thymus, suprarenals and sexual glands are intimately connected and may mutually influence and functionally supplement each other. Also, that there is a connection between these glands, and especially the suprarenals, with growth. In giant growth there is usually a tumor in one or more of these glands, while in dwarf growth there is usually hypoplasia or aplasia. He describes 2 cases which apparently confirm this view.

40. Pseudo-Appendicitis.—Küttner found the appendix and its surroundings completely normal in 3 cases deceptively simulating appendicitis and operated on after subsidence. He is convinced that such cases occur more frequently than is appreciated. Helminthiasis, colics, oxyurides in the appendix, and gases distending the ileocecal region are liable to simulate appendicitis, and muscular resistance in the region may be due to circumscribed contraction of the rectus muscle. The curative effect of many operations in which the appendix is found histologically sound is probably due, he thinks, to severing of certain nerve branches or possibly only to the rest in bed, change of diet and suggestion.

41. Healing of Wounds and Defects in Tendons.—The danger of secondary stretching imposes prolonged immobilization in the treatment of severed tendons or tendon wounds in general. Whether four weeks is enough Seggel considers dubious, from his experience on guinea-pigs. Even forty days are not a long enough interval to ensure safety in functional use of the parts. The tendon sheath plays an important part in the healing which proceeds much more rapidly when the sheath is uninjured. Regeneration of defects does not occur until after reactionary hyperemia, and does not seem to be influenced by the presence of a foreign body, but to be the inherent property of the cells.

42. Healing of Unpedunculated Skin Flaps.—Braun shows by the results obtained in several cases that unpedunculated skin flaps may heal perfectly in place and stand the severest strain, as, for instance, on the heel.

43. Nervous Symptoms Cured by Operation for Colitis.—Lindner has observed several cases of neurasthenic and hypochondriac conditions entailed by chronic colitis and completely cured by an operation on the colon. He regards them as neuroses from chronic obstipation.

44. Resection of Large Intestine in Several Sittings.—Goeschel has operated on 4 cases by this gradual method. One was a carcinoma of the cecum, one of the colon, one of stenosis of the colon by a chronic, hemorrhagic infarct and one a tumor on the adnexa grown to the cecum and appendix. After resection of the intestine he found the continuous bath very useful.

Centralblatt f. Chirurgie, Leipsic.

Last indexed XL, page 1544.

51 (XXX, 19.) *Treatment of Cavities in Tibia and Calcaneus. C. Bayer (Prague).—Zur Behandlung der Knochenhöhlen in der Tibia und im Calcaneus.
52 (No. 20.) Zur Statistik der Ethylchlorid-Narkose. G. Lotheissen (Vienna).
53 Eine neue Säge (saw). V. E. Mertens.
54 (No. 21.) *Mobilisierung des Duodenum und Eingriffe am Gallensystem. H. Lorenz (Hochenegg's clinic, Vienna).
55 *Unilateral Exclusion of Duodenum in Case of Perforating Ulceration on Posterior Wall of Descending Portion of Duodenum. A. A. Berg (New York).—Einseitige Ausschaltung des Duodenum, etc.
56 (No. 22.) *Massage of Heart. D. G. Zesas.—Ueber Massage des freigelegten Herzens beim Chloroform-Kollaps.
57 *Ueber Penis-Amputation. E. Hopmann.
58 (No. 23.) *Die Gastroenterostomie mit Gastrostomie nach Rutkowsky. A. Hammesfahr.
59 (No. 24.) Protection of Patient, Physician and Manufacturers Against Röntgen-ray Injuries. Albers-Schönberg (Hamburg).—Schutzvorkehrungen gegen Schädigungen, etc.
60 (No. 25.) Reply to Berg, Above. M. v. Cackovic (Zagreb, Croatia).
61 *Adrenalin und Lokal-Anesthesie. F. Honigmann.
62 (N[illegible] [illegible] ledochotomie zur Entfernung [illegible] aus dem retroduodenalen und [illegible] communis. A. A. Berg (New York).
63 (No. 28.) Zur Technik der Paraffin-Prothesen. F. Franke.
64 (No. 29.) Eine neue Modification der Maydl'schen Operations-Methode bei congenitaler Blasen-Ectopie (of bladder). J. Borelius (Lund).

51. Treatment of Cavities in Tibia and Calcaneus.—Bayer transforms the cavity into a broad shallow groove, pushing back the soft parts to allow the bone to be modeled to the required shape, rounding the sharp edges of the bone on each side of the groove. The two flaps of skin and periosteum on each side are then turned down over the edge of the bone on each side and fitted into the groove, which they cover except for a strip down the center. A roll of gauze is then laid in the groove on top of the turned-over flaps, held in place by a few interrupted sutures taken in the skin, which also draw the flaps closer together. They heal in place under the pressure of the roll of gauze much more rapidly than by any other method of treatment, and the gap in the center of the groove soon skins over. The outer dressings are not renewed for eight to ten days.

54. **Mobilization of Duodenum for Intervention on Biliary System.**—Lorenz has been testing on the cadaver Kocher's suggestion of mobilizing the duodenum described in THE JOURNAL, xl, p. 613. He finds it simple and easy of accomplishment while the benefit is great, and commends it as a valuable aid for cholecystenterostomy, rendering the latter an easier operation even than a cholecystogastrostomy. It also allows the choledochus to be brought nearer the surface. Its most important use, however, is to allow free access to the retroduodenal portion of the choledochus.

55. **Treatment of Fistula in Descending Portion of Duodenum.**—Berg points out that the lack of peritoneal covering at this point of the intestines renders the repair of a perforating ulcer here a difficult matter. He suggests treating this condition by establishing a gastrojejunostomy and tying off the pylorus with a tobacco-purse suture. This would prevent the escape of chyme through the fistula, while retaining the benefits of stomach digestion. (The priority for this operation is claimed by Cackovic in No. 25.)

56. **Massage of Heart in Chloroform Collapse.**—Zesas states that massage of the exposed heart is theoretically contrary to what we know of the mechanical action and physiology of the organ. In practice, also, no permanent successes have been recorded. He disapproves of it and believes that better results will be attained by devoting the entire attention to the usual measures of resuscitation. About a dozen cases have been reported in which massage of the heart was tried and he adds another to the list, remarking that it dates from the 80's and was thus the pioneer of all. The patient was a robust man of 40 who wished to be relieved of a goiter that interfered with swallowing and breathing, otherwise perfectly healthy. Niehaus was the surgeon. The chloroform narcosis proceeded normally, but, before the operation commenced, the respiration and heart stopped and all measures, including resection of ribs and rhythmical compression of the heart, proved ineffectual to resuscitate the patient.

57. **Amputation of Penis.**—Hopmann describes the success of the Bardenheuer method of amputation as evidenced by a patient seen recently nine years after the penis had been amputated on account of cancroid. There has been no recurrence and the method absolutely prevents stricture. The principle of the operation is to leave the urethra, detached from surrounding tissues, projecting for 2 cm. from the stump. The skin flap is then sutured around the base of the urethra without including the urethral mucosa in the suture. During the healing process the edges of the projecting portion of the urethra curl over outward, thus producing a wide and permanent orifice. Four other cases in which this method has been followed show equally favorable results.

58. **Rutkowsky's Method of Gastroenterostomy with Gastrostomy.**—Hammesfahr has combined these two operations, as suggested by Rutkowsky, and confirms the latter's statements in regard to the simplicity of the intervention and the prevention of the vicious circle. His experience now includes 12 cases of chronic stenosis of the pylorus or an ulcer or carcinoma at this point, operated on by this technic, and he has always been gratified with the results.

61. **Adrenalin and Local Anesthesia.**—Honigmann reports experiences which confirm Braun's announcement in regard to the way in which the addition of adrenalin to cocain immeasurably enhances the anesthetic action of the latter.

Centralblatt f. Gynaekologie, Leipsic.

Last indeed XL, page 1688.

65 (XXVII, 19.) *Treatment of Indentations of Skull in the Newborn. P. Baumm (Breslau).—Behandlung der Schädelimpression bei Neugeborenen.
66 Zur Anwendung des Bossi'schen Dilatators. Jentzer (Geneva).
67 Der Schultz'sche Nadelhalter (needle holder). Schnell (Frankfurt a. M.).
68 (No. 20.) *Zur Physiologie der Befruchtung, Parthenogenese und Entwicklung. A. Schücking (Pyrmont).
69 Ein neues Pessarium zur Behandlung grosser inoperabler Genital-Prolapse. W. Rosenfeld (Vienna).
70 (No. 21.) Beitrag zur Kasuistik der Adenomyome des Uterus. H. Füth.
71 Ueber Fermente im Liquor Amnii. J. Bondi.
72 (No. 22.) True and Simulated Extrauterine Pregnancy. K. Kober.—Zur Frage der wahren und vorgetäuschten Extrauterin-Gravidität.
73 Two Cases of Repeated Tubal Pregnancy. K. Reifferscheid.—Zwei Falle von wiederholte Tubargravidität.
74 (No. 23.) Fracture of Clavicle in Delivery in Head Presentation. N. Muns (L. Meyer's service, Copenhagen).—Klavikularfrakturen Neugeborener bei Geburt im Schädellage.
75 *Buried Circular Ligatures of Vagina in Retroflexio Uteri. A. Schücking.—Versenkte circuläre Vaginalligaturen bei Retroflexio uteri.
76 Extirpation of Pregnant Uterus in Woman Nearly 56. Geyl (Gineken).—Exstirpation der schwangeren Gebärmutter einer nahezu 56 jährigen Frau.
77 (No. 24.) Essential Principles in Protection of Perineum. v. Budberg (Dorpat).—Wesentliche Grundsätze bei Dammschutz und Expression.
78 *Ueber Anesthol, Ein neues Narkoticum. W. Foerster.
79 (No. 25.) *Dependence of Hyperemesis Gravidarum on Hysteria. B. Feinberg.—Die Abhängigkeit der Hyp. grav. von Hysterie.
80 *Retroflexio-Operation. S. A. Alexandroff.
81 (No. 26.) *Ueber Graviditäts-Ikterus. L. Brauer.
82 Ovarian Teratoma Composed Almost Exclusively of Thyroid Tissue. A. Glockner.—Ueber ein fast ausschliesslich aus Schilddrüsengewebe bestehendes Ovarialteratom.
83 Ein neuer Kinds-Perforator. E. Tridondani (Pavia).
84 Welche Maske ist für die Ether-Narkose am empfehlenswertesten? Beaucamp.
85 (No. 27) *Zur Etiologie des Carcinoma vaginæ.. G. W. Maly.
86 Retroversio uteri und Appendicitis. F. Neugebauer.
87 Fall von Cervico-Vaginalfistel. J. Goldenstein.
88 (No. 28.) Eine nach der Küstner'sche Methode operierte geheilte Inversio uteri puerperalis. A. Dienst.
89 Clamping the Uterine Arteries. A. Labhardt.—Zur Henkel'schen Abklemmung der Uterinæ bei Post-partum Blutungen; zugleich ein Beitrag zur Bossi'schen Dilatation.
90 *Kurze Mitteilung zur mikroskopischen Technik der Schnitte (of sections). G. Zepler (Berlin).
91 (No. 29.) Report of German Gynecologic Congress. (Commenced in No. 27.)
92 Ueber Tetania strumipriva einer Schwangeren (in a pregnant woman). A. Dienst.
93 Case of Repeated Fundal-Incisio bei Sectio cesarea. S. Flatau.

65. **Treatment of Indentation of the Skull in the Newborn.**—Baumm has used in 4 cases a small corkscrew to raise the indented portion. The instrument is made specially for the purpose with the turns close together and it is inserted only far enough to hold. The procedure is harmless and has proved effectual.

68. **Physiology of Fertilization, Parthogenesis and Development.**—Schücking relates experiments on echinoderms (*Asterias glacialis, Arbacia pustulosa* and *Strongylocentrotus lividus*), which establish that the processes which induce development of the ovum may be traced to a number of mechanical and chemical actions, and that development is independent of fertilization. He found that the head of the spermatozoön does not bore into the ovum, but becomes surrounded by a hyaline process of the protoplasma and is sucked into the ovum. The development of the ripe ovum is started by absorption of water. Fertilization occurred with spermatozoa placed on the ovum, deprived of their tails. Parthogenesis may be induced by various external stimuli, chemical, thermic or electric light. Relaxation follows the stimulation, and in this stage water enters and starts the development. He found the best medium for the study of parthogenesis to be sea water to which acetic acid had been added in the proportion of one or two drops to 200 gm. sea water.

75. **Circular Ligature of Vagina for Retroflexio.**—Schücking noticed that the uterus in sliding into retroflexion pushes the vaginal wall downward, and reasoned that if the vaginal wall offered a resistance the retroflexion could not occur. He has treated a number of cases on this principle and the results surpassed his anticipations. His technic consists in making a buried circular ligature each side of the portio and in the posterior vaginal vault. He uses silver wire and removes it after four to six weeks, ordering a small pessary to be worn for a time afterward. The procedure is too simple to be called an operation and seldom requires narcosis. The needle is passed around in a circle under the mucosa, emerging at its entering point, or inserted in two semicircles. In large vaginæ he sometimes makes as many as six of these circular sutures. The result is two folds at the side, which hold the portio firm, and a cicatrix in the posterior vaginal vault, which offer a resistance to the pushing down of the vaginal wall indispensable to retroflexion.

78. **Anesthol.**—Foerster commends to his compatriots the method of anesthesia which Willy Meyer described in the last volume of The Journal, p. 553.

79. **Vomiting of Pregnancy and Hysteria.**—Feinberg relates 2 cases of hyperemesis gravidarum in which he believes the idea of hysteria as the cause of the condition is absolutely untenable.

80. **Retroflexion Operation.**—Alexandroff advocates shortening the broad ligaments as the rational method of remedying retroflexion. He passes a provisional ligature through each of the ligaments, 3 to 3.5 cm. from the collum, and draws them down by pulling on the crossed ligatures. The ligaments thus brought into contact and shortened are sutured together over the anterior surface of the collum, including some of the latter in the suture which must never pass beyond the internal orifice. The uterus retains its entire movability by this operation, while retroflexion is prevented and no disturbances of any kind followed in the cases thus treated.

81. **Pregnancy Icterus.**—Brauer reported a year ago a case in which hemoglobinuria recurred at each pregnancy, and now describes another in which icterus was observed about the fourth month in four pregnancies. In both cases the condition was accompanied by symptoms indicating general derangement, but all vanished after delivery.

85. **Etiology of Carcinoma Vaginae.**—Maly observed a case in which a carcinoma developed in the vagina at the point of greatest pressure from a pessary. It was a ring of soft rubber and had been worn for thirty-nine years.

90. **Microscopic Technic.**—Zepler has found it a great improvement to use an ordinary wire sieve for sections, as it allows a large number at a time to be submitted to the various staining and rinsing procedures. A still further improvement is to use instead of the sieve a white porcelain or glass vessel perforated with numerous small holes. The sections are more easily taken up from this than from a sieve.

Riforma Medica, Palermo.

Last indexed page 471.

94 (No. 22.) *Una forma familiare di paralisi arsenicale. L. Ferrannini.
95 Sulla fisiologia del lobo orbitario (of orbital lobe). Ibid. Experimental study. (Commenced in No. 21.)
96 Nuovo contributo alla chirurgia del sistema nervoso centrale. G. Bendandi. (Commenced in No. 21.) Report of 11 cases operated on.
97 (No. 23.) Sopra un caso di xeroderma genitodistrofico. P. Bueri.
98 *La sinorchidia nelle operazioni conservatrice del testicolo. G. Pascale.
99 *Sopra la determinazione della tensione osmotica del sangue, etc., per crioscopia. G. Ferrannini.
100 *Sulla bacteriuria. L. Ferrannini.
101 (No. 24.) Metabolism of Carbohydrates. L. Ferrannini.—Sul ricambio degli idrati di carbonio. La carboidraturia fisiologica.
102 *Un caso di angina e croup da pneumobacille di Friedländer. D. Cionini.
103 Contributo allo studio della diazo-reazione di Ehrlich. C. di Bernardo.
104 The Toxins in Burns. L. Verney.—Sui veleni delle scottature.
105 (No. 25.) *Sulla patogenesi dell'anchilostomo-anemia. U. Gabbi.
106 *Action of Human Gastric Juice on Tubercle Bacilli. L. Ferrannini.—Azione del succo gastrico umano sui bacilli tubercolari.
107 *Sull' uso del acido picrico nella cura della blenorrhagia uterina. A. Serra.
108 *Organic Balance in Case of Mitral Infantilism. L. Ferrannini.—Infantilismo non distiroideo. Il bilancio organico in un caso di infantilismo mitralico. (Commenced in No. 23.)
109 (No. 26.) *Di un nuovo fenomeno osservato in un caso di malattia di Adams-Stokes. A. Zeri.
110 Dell' azione dei nucleo-proteidi sulle cellule del parenchima epatico. G. Guerrini.
111 Corea molle, epilessia coreica e miastenia pseudo-paralitica. L. Ferrannini.
112 L'uretero-uretero-anastomosi con uno speciale tubo di magnesio. D. Taddei.
113 (No. 27.) *La eliminazione provocata del cloruro sodico nei nefritici. F. De Grazia.
114 Cortical Center for Deviation of Head. F. Schupfer.—Sul centro corticale della deviazione del capo e sul centro grafico.
115 Yellow Diazo. C. Gualdi.—La diazo-reazione gialla.
116 Micro-organisms in Lungs in Heart Disease. F. De Grazia.—I microorganismi dei polmoni dei cardiaci. (Commenced in No. 26.)

94. **Family Arsenic Poisoning.**—Three members of the same family reproduced the same clinical picture of paralysis after the entire family had suffered from symptoms of poisoning from arsenic in the flour. The other members recovered without paralysis. It was evidently the result of a toxic neuritis in the mother and two children affected.

98. **Synorchidia in Conservative Operations on the Testicles.**—Pascale has experimented on animals and the results have been confirmed in the clinic, demonstrating that it is possible to unite the two testicles and that a single vas deferens will suffice for both. This retains the gland and its internal secretion and allows the latter to issue by the natural channels, while the parts most liable to be infected by a tuberculous process in the epididymis may be removed. His technic is the systematic resection of the entire tuberculous epididymis and vas deferens on the side affected, leaving the vessels and nerves intact. He then opens up the rete testis and determines the integrity of this part of the gland before proceeding further. This portion of the gland is then implanted on the part of the sound testicle opposite to it, which is very easily done after removing the intertesticular septum. In 4 cases treated in this manner the results have fully confirmed the successes on animals previously published. They establish that the functional activity of a testicle thus implanted on its mate is maintained even after complete extirpation of its vas and epididymis, retaining the vascular and nervous elements. He calls this union "synorchidia" and adds that the vessels in the rete testis of the corpus Highmorianum retain their normal current, as they open at the base of the spermatic lobules, and the current passes through them and the straight tubes to the corpus Highmorianum of the testicle on the sound side, merely doubling the length of the normal route. Scaduto has published good results from implanting the vas deferens in the testicle after ablation of the epididymis, but Pascale thinks that this exposes to greater danger of inoculating the testicle. The indications for this synorchidia are tuberculous or other processes or tumors in the epididymis.

99. **Cryoscopy.**—Ferrannini has been studying the determination of the osmotic tension of the blood and organic fluids by means of cryoscopy, and points out various sources of error in the findings and means to avoid them. He thinks the results will be more harmonious if a standard freezing mixture is adopted, such as ether, the evaporation regulated by a stopcock admitting air, as in Raoult's apparatus, or a mixture of 20 per cent. sodium carbonate with the ice, which ensures a temperature of minus 2.015 degrees C. The fluid to be examined should never be diluted, and the attempt should not be made with a quantity less than 8 c.c. It is immaterial, he has established, whether the blood serum or merely defibrinated blood be used for the test. In the latter case a smaller amount of blood is required. It is important also to have the air in the test tubes dried beforehand to prevent variations from different degrees of evaporation. It is indispensable to stir the fluid while it is congealing, and this vertically. This is done with a glass rod through the stopper of the tube, and in order to ensure the non-admittance of air he has the rod pass through a bag of thin rubber, one end of which is tied to the tube.

100. **Bacteriuria in Animals.**—Ferrannini relates that he found various micro-organisms in the urine of every one of a number of rabbits and dogs he examined.

102. **Membranous Croup from Pneumobacillus.**—The case progressed to a fatal termination uninfluenced by antidiphtheria serum treatment. Large numbers of Friedlander's pneumobacillus were cultivated from the false membranes.

105. **Anchylostoma Anemia.**—Gabbi, three years ago, announced that the blood of subjects with anchylostoma anemia had a destructive action on the red corpuscles of the rabbit. He has found since that this destructive action occurs also with the red corpuscles of debilitated human subjects. The toxicity of the urine is also increased, the alcoholic extract inducing gradual fatal anemia in rabbits. The anemia in anchylostoma infection is due at first to the repeated losses of blood, but is maintained by imperfect regeneration of the blood in the bone marrow and by the slow destruction of the red

corpuscles in the vessels owing to the hemolytic power of the blood serum in this condition.

106. **Action of Gastric Juice on Tubercle Bacilli.**—Ferrannini's experiments with guinea-pigs showed that human gastric juice, even with as much as 2 per 1000 free hydrochloric acid, had no inhibiting action on tubercle bacilli. Tuberculosis followed in every instance after ingestion of bacilli mixed with gastric juice in conditions approximating those in the human stomach.

107. **Picric Acid in Uterine Gonorrhea.**—Serra reports 21 cases of gonorrheal urethritis, with metritis, bartholinitis or vulvovaginitis, including 5 cases in which the gonococci were not found, but otherwise presented the same picture. All were treated with injections of a 12 per 1000 solution of picric acid, and he found the results very satisfactory. It destroys the gonococci and they vanish early if treatment is commenced promptly. The injections are made about twice a week, with a Braun syringe holding 5 c.c.; the fluid is injected into the uterus and the vagina tamponed with gauze removed the next day. His patients were cured with one exception in from ten to forty-five days, and there has been no recurrence since. These intrauterine injections are not irritating, but have a decided analgetic action, and for their other advantages, inexpensiveness, reliability, stability of the preparation, etc., deserve more general adoption. He describes his cases in detail.

108. **Metabolism in Infantilism.**—Ferrannini concludes this long article with its numerous tables with the warning tha we must not confound the Lorain type of infantilism with the myxedematous or Brissaud type. The Lorain type may be tuberculous, syphilitic, malarial or toxic in its nature, or what he calls angiodysplastic infantilism. There are two varieties of the latter, the pulmonary and the mitral. In his research on a case of this mitral kind he found the metabolism abnormal in that it corresponded to an age younger than that of the patient.

109. **New Phenomenon in Case of Adams-Stokes Disease.**—The phenomenon which Zeri qualifies as new is that for hours at a time there was perfect synchronism between the pulse and heart beat and the respiratory movements. The heart, the pulse and the inspiration had a simultaneous rhythm. Between the inspirations the tracing of the heart action was nearly a straight line.

113. **Induced Elimination of Sodium Chlorid in Nephritics.**—De Grazia reports tests with five nephritic patients which establish that alimentary chloruria may be a valuable indication of the functional condition of the kidney. In 2 cases of chronic interstitial nephritis the results were different. In one, after ingestion of 10 gm. of sodium chlorid, there was no increase in the elimination of salt the first day, and only a very slight increase the next, while in the other case the kidney was stimulated to eliminate 14 gm. more of the chlorid than ordinary, the amount rising from 17 to 31 gm. The water also increased in proportion and the phosphates and nitrogenous elements. In chronic parenchymatous nephritis the kidney did not respond in any way to the salt taken nor in a case of valvular disease with slight evidences of chronic nephritis. In every instance the kidney responded abnormall to the test.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

Radium and Other Radio-Active Substances; Polonium, Actinium and Thorium, with a Consideration of Phosphorescent and Fluorescent Substances, the Properties and Applications of Selenium and the Treatment of Disease by the Ultra-violet Light. By William J. Hammer, Consulting Electrical Engineer. Cloth. Pp. 72. Price, $1.00. New York: D. Van Nostrand Co. 1903.

King's College Hospital Reports. Being the Annual Report of King's College Hospital and the Medical Department of King's College. Edited by Norman Dalton, M.D., F.R.C.P., Albert Carless, M.S., F.R.C.S., John Phillips, M.A., M.D., F.R.C.P., W. D. Halliburton, M.D., F.R.S. Volume VIII. Jan. 1-Dec. 31, 1901. Cloth. Pp. 478. Price, 7s. 6d. London: Adlard & Son. 1903.

Modern Bullet Wounds and Modern Treatment, with Special Regard to Long Bones and Joints, Field Appliances and First Aid. Part of the Alexander Essay for 1903. By Major F. Smith, D.S.O., Royal Army Medical Corps. Cloth. Pp. 99. Price, $1.20 net. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co. 1903.

Seventh Annual Report of the Manhattan State Hospital at New York to the State Commission in Lunacy. For the Year Ending Sept. 30, 1902. Paper. Pp. 106. Albany: J. B. Lyon Co. 1903.

Transactions of the Seventh Annual Session of the Tennessee State Medical Association, Nashville, 1903. Cloth. Pp. 320. Nashville: Southern Publishing Association.

Annual Report of the Board of Health of the City of Winona, Minn. Year Ending March 31, 1903. Paper. Pp. 10.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. Army, under orders from the Adjutant-General's Office, Washington, D. C., for the two weeks ending Saturday, Aug. 22, 1903:

Appel, Daniel M., major and surgeon, having completed the duty for which he was ordered to Denver, will proceed, at the proper time, to San Francisco and take transport to sail from that place not later than Oct. 1, 1903, for the Philippine Islands, where he will report for assignment to further duty.

Gregory, Junius C., first lieut. and asst.-surgeon, is relieved from duty at the U. S. General Hospital, Washington Barracks, to take effect at such time as in the opinion of the commanding officer of that hospital his services can be spared, and will then proceed to San Francisco and report for assignment to duty at the U. S. General Hospital, Presidio.

Godfrey Guy C., captain and asst.-surgeon, now at San Francisco, will proceed to Fort Apache for duty.

Godfrey, Guy C. M., captain and asst.-surgeon, is granted leave of absence for two months.

Hodson, F. A., contract surgeon, is granted leave for two months, to take effect on the arrival at Fort McKenzie of First Lieut. Henry H. Rutherford.

Johnson, Richard W., major and surgeon, is granted an extension of fifteen days' leave.

La Garde, Louis A., major and surgeon, is granted an extension of leave for three months.

Pomeroy, William, contract surgeon, is granted leave of absence for twenty days.

Sinks, E. D., contract surgeon, is granted leave of absence for two months from about September 1.

Wheeler, Lewis H., contract surgeon, is relieved from duty in the Department of Dakota, and will proceed to his home, Westport, Conn., for annulment of contract.

Brechemin, Louis, major, will proceed to Ord Barracks and report at that post for duty, to relieve Captain P. F. Straub, who, on being thus relieved, will proceed to Fort Leavenworth and report for duty.

Brechemin, Jr., Louis, first lieut., will proceed to Fort Baker and report for duty.

Carswell, R. L., first lieut., will report for transportation to the Philippine Islands and, on arrival at Manila, will report for assignment to duty.

De Witt, Wallace, first lieut., is relieved from duty at Fort Porter, and will proceed to Fort Myer for temporary duty.

Ford, J. H., first lieut., is granted a leave of absence for ten days.

Henderson, A. B., first lieut., is granted an extension of leave for twelve days.

Lyster, T. C., first lieut., will make not to exceed two visits each week to New York City on business pertaining to the examination of recruits.

Whitcomb, C. C., first lieut., is relieved from duty at Fort Preble and will proceed to Fort McKinley.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending Aug. 22, 1903:

Surgeons A. G. Grunwell and W. H. Bucher, appointed surgeons from June 20, 1903.

P. A. Surgeon J. C. Thompson, commissioned as such Aug. 10, 1903.

Surgeon F. W. F. Wieber, ordered to the *Prairie* August 21.

Asst.-Surgeon R. E. Riggs, detached from the Naval Hospital, Philadelphia, and ordered to the Navy Yard, Washington, D. C.

Asst.-Surgeon H. L. Brown, detached from the Navy Yard, Washington, D. C., and ordered to the Naval Hospital, Philadelphia.

Surgeon H. G. Beyer, detached from the *Prairie* and ordered to duty as member of a Board on Barracks.

Asst.-Surgeon A. D. McLean, ordered to the *Wabash*, at Boston.

Asst.-Surgeon S. L. Scott, ordered to the Naval Hospital, Chelsea, Mass.

Asst.-Surgeon J. A. Randall, ordered to the Naval Hospital, Norfolk, Va.

Asst.-Surgeon F. G. Abeken, ordered to the Naval Hospital, New York.

Asst.-Surgeon T. N. Pease, ordered to the Naval Hospital, Newport, R. I.

Medical Inspector E. Z. Derr, detached from the *Chicago* and ordered home to wait orders.

Surgeon E. O. Huntington, when discharged from Naval Hospital, New York, granted sick leave for three months.

P. A. Surgeon D. H. Morgan, ordered before a retiring board, September 4, at the Navy Yard, Mare Island, Cal.

Asst.-Surgeon M. V. Stone, ordered to the Naval Hospital, New York, for treatment for a period of six months.

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Original Articles.

EYE COMPLICATIONS OF SMALLPOX.

SOME OBSERVATIONS DURING THE RECENT EPIDEMIC IN CLEVELAND.*

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CLEVELAND, OHIO.

The recent epidemic of smallpox was the severest in the history of the city, and has seldom been equaled in the number of cases and in malignancy in recent times, in civilized countries, as will be seen by the accompanying chart, which shows cases and deaths, prepared by Dr. Probst, secretary of the Ohio State Board of Health. The total number of cases for 1902 was 1,248, with 224 deaths. The death rate was 17.9 per cent., and, as Dr. Probst well said: "This was the genuine old-fashioned smallpox." Many of the cases were of the most malignant character and exceedingly contagious, unlike the mild form of the disease which hitherto prevailed.

The cause of this widespread epidemic is not far to seek. During Dr. G. C. Ashmun's incumbency of the Cleveland health office, from 1880 to 1891, the rule requiring vaccination of all school children was rigidly enforced; but since that time it has been followed more in the breach than in its observance, consequently a large percentage of the population were unprotected by vaccination.

The general indifference to vaccination was fostered by a few cranks, led by a certain doctor of divinity, who organized an anti-vaccination society, and the vaporings of this crank and his followers were kept perennially before the public in the newspapers.

From 1898 to 1901, inclusive, an epidemic prevailed in Cleveland of a mild variola. In 1898 there were 48 cases and no deaths; 1899, 475 cases and 3 deaths; 1900, 993 cases and 16 deaths, and in 1901, from January 1 to August 23, 1,230 cases and 20 deaths, making a total of 2,746 cases and 39 deaths during the four years. The mortality was less than .015 per cent.

During all these years there was a constant clamor in the newspapers about the evils of vaccination. Unfortunately, during the summer of 1901 some poor virus was used, and many badly infected arms developed. Several cases of tetanus were reported. A particularly sad one was that of a beautiful young lady who died of tetanus from the result of vaccination performed by her brother, a young physician.

This epidemic was terminated by a vigorous policy of vaccination and quarantine by Dr. Heimlich, who occupied the position of health officer for a short time, but whose strenuous methods did not meet the approval of Mayor Tom Johnson (unfortunately, the mayor is immune, having had smallpox when a boy). On one occasion, it is alleged, he said that he did not believe in vaccination, and no member of his family should be vaccinated with his consent.

Dr. Heimlich was deposed, and Dr. Martin Fredrick installed as health officer. He immediately commenced a vigorous crusade of house-to-house disinfection with formaldehyd.

Dr. Fredrick is a most efficient officer, a thoroughly educated gentleman, an indefatigable worker, with great patience and perseverance. He had placed at his command every resource to combat an epidemic without vaccination. A more competent man for such an undertaking could not have been found, and his complete and disastrous failure ought to be sufficient to close the mouths of every anti-vaccinationist in the country.

There ought to be some way of disseminating this failure of Dr. Fredrick's disinfecting crusade in 1902 as wide as the reputed success of his efforts in 1901, which did not prove anything, as the epidemic had already been stamped out by vaccination before he assumed office. There was not a single case of smallpox in Cleveland when Dr. Fredrick took charge of the health office. The paper he read before the Academy of Medicine on "How We Rid Cleveland of Smallpox"[1] was unfortunate in its title, to say the least.

The antivaccinationists quoted him far and wide as being opposed to vaccination; but a careful perusal of his original paper reveals that he believes thoroughly in vaccination, and ought not to have been misrepresented. His protest was justly against the use of impure virus.

During the entire epidemic of mild smallpox, in which 2,746 cases were reported, not a single one of severe eye complications came under my observation, and I have not heard of any cases among my confrères.

During the recent epidemic there have been a number of cases of serious eye complications, and I wish to put on record the present condition of some of these unfortunate patients.

CASE 1.—Mr. O. N., age 30; superintendent. Large adherent corneal opacities of both eyes. Left eye light preception, but no hope of improvement. Right eye good light preception, a small band of clear cornea at outer side. It is possible but not probable that an iridectomy can be made at some future time, giving a little useful vision.

CASE 2.—Mrs. K. S., age 26; housewife. Large perforating ulcer of left eye, including entire cornea, followed by iridocyclitis. Enucleated to relieve pain.

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* Read at the Fifty-fourth Annual Session of the American Medical [illegible] the Section on Ophthalmology, and ap- [illegible] the Executive Committee: Drs. J. A. [illegible] and John E. Weeks.

[1] Cleveland Medical Journal, February, 1902.

Case 3.—B. K., three-year-old girl. Large ulcer involving more than half of cornea of right eye. Staphyloma as large as a bean, with pressure bandage became smooth. Eye quiet, a little clear cornea above, but no useful vision.

Case 4.—T. K.; laborer; age 33. Total staphyloma of cornea of right eye. Iridocyclitis. Enucleated to relieve pain.

Case 5.—W. A. H.; mail clerk; age 27. Large ulcer of cornea of right eye including nearly entire cornea, but not perforated. Pupil moderately dilated. Hypopyon. Considerable pain. Ulcer healed very slowly. Counts fingers, but can not hope for much improvement.

Case 6.—E. P., school girl; age 12. Small ulcer of cornea of right eye. Made little complaint of eye until after discharged from hospital. Several days afterward suddenly developed intense panophthalmitis. Phthisis bulbi.

Case 7.—G. S., school boy; age 10. Ulcer of cornea of left eye. Panophthalmitis developed before discharged from hospital. Phthisis bulbi.

Case 8.—J. L., age 27; bricklayer. Left eye ulceration of entire cornea. Immense staphyloma developed so that lids could not be closed and became painful. Enucleated.

Right eye ulceration of almost entire cornea. Anterior chamber full of pus. Saemich operation. Fistula of cornea. Still under observation. Small portion of clear cornea. May be able to make iridectomy and secure a little useful vision, but very doubtful.

Case 9.—R. F., bookkeeper; age 28. Large ulcer of cornea of right eye. Not perforated. Opacity of cornea at present time, including lower 2/3 of cornea. With pupil dilated, vision 10/200.

Case 10.—T. R., driver of delivery wagon; aged 19. Ulcer of lower half of cornea of right eye not perforated. Vision six months later 20/200.

Case 11.—F. M., press hand; age 23. Large perforating corneal ulcer of right eye. Discharged from hospital Nov. 1, 1902. At present writing, March 26, 1903, adherent scar involving at least 3/4 of the cornea, with small fistula just above where the pupil ought to be. Light perception. Still under treatment.

Case 12.—B. M., four-year-old girl. Discharged from hospital with small corneal ulcer of right eye. Subsequently developed panophthalmitis. Phthisis bulbi.

The following notes were made by Dr. Hartzell. The patients have not been seen since discharged from hospital.

Case 13.—John S., age 26. Discharged from hospital with panophthalmitis of left eye.

Case 14.—Mary P., age 6 months. Discharged from hospital with small corneal ulcer of left eye.

Case 15.—Henry B., age 44. Left hospital with small ulcer of left eye.

Case 16.—Louis A., aged 2 years. Discharged from hospital with small ulcer of left eye.

Case 17.—Jennie J., age 28. Discharged from hospital with large ulcer including entire cornea of left eye, and almost entire cornea of right.

Case 18.—William B., age 18. Discharged from hospital with small ulcer of cornea of left eye.

Case 19.—Gilbert B., age 30. Discharged from hospital with perforated corneal ulcer and iridocyclitis of left eye.

Case 20.—Benjamin C., age 55. Discharged from hospital with panophthalmitis of right eye.

Case 21.—Sadie G., age 30. Discharged from hospital with small ulcer and iridocyclitis of left eye.

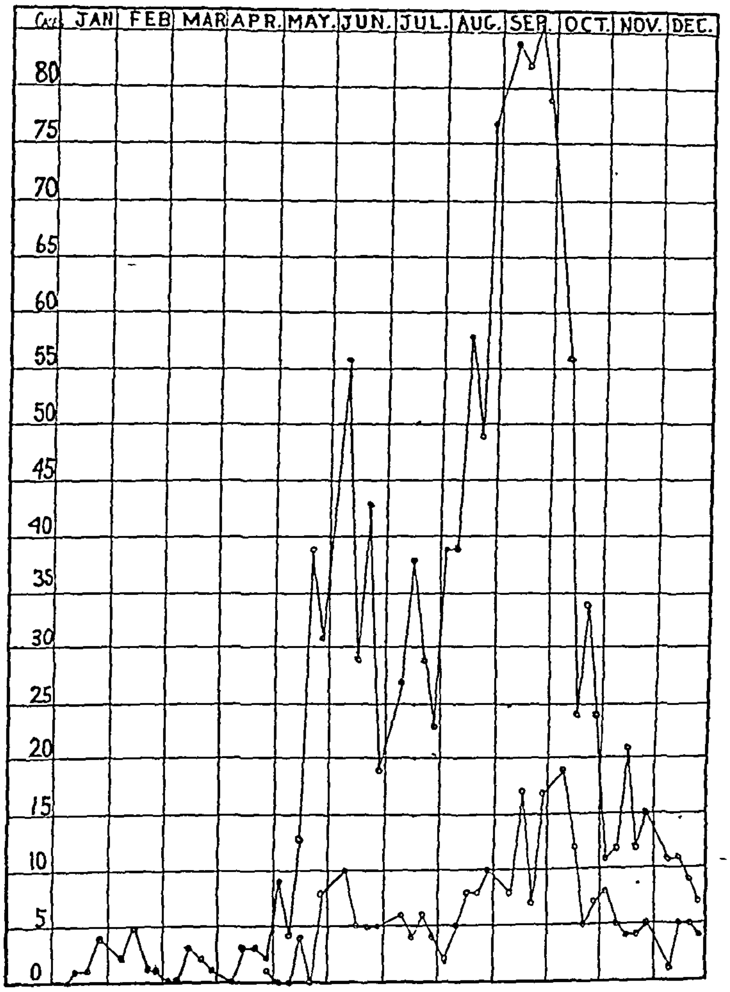
Case 22.—Frank B., age 24. Discharged from hospital with small ulcer of right eye.

Case 23.—Walter V., age 18. Discharged from hospital with large ulcer of cornea of right eye and severe ulcer and iridocyclitis of left eye.

No records are available to determine accurately the total number of cases in which the eyes were seriously involved. But I requested Dr. Homer J. Hartzell to make a note of the cases that came under his service at the Detention Hospital. Dr. Hartzell admitted and treated 425 cases. He had 16 cases of late eye involvements, 13 of one eye and 3 of both, or about 3¾ per cent., which would give us between 45 and 50 cases during the entire epidemic. I think this is approximately correct.

The severity of this infective process may be better appreciated when we recall that of the above 23 cases, 4 are blind in both eyes, with little hope of improvement; 8 have either been enucleated or atrophied from panophthalmitis; 6 are blind in one eye, but the form of the eyeball is preserved. It is probable that several of these will have to be enucleated later. Three have vision of less than 20/200, and not more than 5 have vision better than 20/200, and 2 have corneal fistula, and are still under observation.

In view of this discouraging array of blind and damaged eyes, notwithstanding our supposedly newer and better methods of treatment, we can readily believe the statement of the older writers, that one-third of all the blind people in Europe before Jenner introduced vaccination were due to smallpox.



Smallpox in Cleveland, 1902. Upper curve, cases; lower curve, deaths.

All these patients had severe confluent variola. In not a single case could be elicited a history of having been successfully vaccinated. In all of the cases attention was called to the corneal lesion relatively late in the disease, about the end of the second, or beginning of the third week, and in a few cases much later. Case 12 was discharged from the hospital with a small ulcer of the cornea, but three weeks later panophthalmitis developed.

A number of these cases were examined bacteriologically and streptococci were always found. Occasionally a mixed infection, with staphylococcus, was present.

Most severe cases of variola have a conjunctivitis and great swelling of the lids early in the disease, and frequently it is impossible to open the eye so as to see the cornea for several days. The fear that destructive corneal lesions may be transpiring unobserved beneath the greatly swollen lids is not often realized; for when the lids can be first opened the cornea will be found clear. The first indication of corneal complications will usually be noticed several days later, after pus and crusts have been forming, and it is quite certain the infection is carried into the eye from the skin on the fingers, handkerchief, dressing, eyedroppers, or directly from crusts on the edges of the lids.

When the house physicians, nurses, attendants and patients at the detention hospital became fully cognizant of the importance of this observation as to the source of the infection, and every possible precaution was taken to disinfect the structures around the eye, there was an appreciable falling off in the number of eye complications.

The patients, however, who suffered most severely were those who barely escaped with their lives, and, doubtless, one reason there are not more blind from smallpox is because so many of the confluent cases die. The vitality of those who survive is so lowered that the cornea sometimes melts away with very little attempt at repair, as I have sometimes seen it do in severe cases of scarlatina, typhoid fever, and other severe and depressing diseases.

In view of my observations during this epidemic, I can not agree with Mackenzie's[2] statement: "Secondary variolous ophthalmia seldom leads to destruction of the cornea unless the case is altogether neglected." Our cases were not neglected. Resident physicians were in constant attendance, the best of trained nurses were employed, oculists were frequently consulted and patients were given constant and careful attention. One of the resident physicians said: "More time and care was devoted to the eye cases than all the others combined."

Doubtless, there were mild cases of keratitis that escaped our notice, such as described by Dr. Edward Jackson[3] in his admirable paper. But they must have been rare. No case of primary infection of the conjunctiva, such as reported by Dr. E. P. Morrow,[4] came under our observation. I am indebted to Dr. D. B. Smith for the report of the following case: Miss C. K., nurse at the detention hospital, was vaccinated a few days before taking the position, and had a very much inflamed arm, with several characteristic pustules. On the mucous membrane of the right upper eyelid, just at the transitional portion, a perfectly well-defined ulcer appeared. The lid was swollen greatly, and the diagnosis of vaccine pustule was made. Patient made a perfect and uneventful recovery. All of the cases began relatively late in the disease, and were due to a secondary infection, although it is quite possible that there may have been some slight abrasion of the cornea as the result of a primary lesion, thereby permitting the entrance of pathogenic germs later.

Early in the epidemic, while laboring under the belief that the eyes were destroyed as the result of a primary lesion of the conjunctiva or cornea, cases were treated with instillations of 1 per cent. solution of nitrate of silver as a prophylactic, but it seemed with deleterious results. Then protargol formalin and other disinfectants were used, with no better success. Later, subconjunctival injections of bichlorid were used in several cases without benefit. Fewer cases of corneal complications developed, and our cases progressed better when a routine practice was adopted of frequent washing of the face and lids with 1/4000 bichlorid and flooding the conjunctiva four or five times daily with saturated boric acid solution, and on the first evidence of corneal complications an instillation of 1 per cent. of atropia sulphate two or three times daily. The later treatment of these cases was in no way different than that of corneal ulcers from any other cause.

In conclusion, I wish to observe:

1. In view of the growing sentiment against vaccination almost any community is liable to experience an epidemic as disastrous as that through which Cleveland has just passed.

2. The eye complications of smallpox are greatly to be feared. The dangerous corneal complication is a secondary infection, commencing about the twelfth day, but many come much later.

3. The infection in the Cleveland epidemic was a streptococcus one, and different in no way from similar infection of the eyes of a patient already much exhausted from a serious disease.

4. No specific prophylactic treatment has been found, and the best that can be done is to keep the face and eyes in as nearly an aseptic condition as possible by frequent washing and the use of such antiseptics as will prove the least harmful to the eye.

122 Euclid Avenue.

DISCUSSION.

Dr. J. F. Fulton, St. Paul, Minn.—I did not know until a recent epidemic that the eye complications of smallpox were so common. During a recent epidemic we had the same fight in our legislature for the enforcement of vaccination. I had under my care two cases of central ulceration of the cornea. They occurred during the stage of convalescence and resulted in permanent opacities, and it will be necessary to do an iridectomy to secure an improved vision. They were treated on the same line as we treat all ulcers of the cornea. There is a question as to the nature of the ulcer—whether it is the eruption of smallpox or an ulcer due to the run-down condition of the system. It is quite possible that it may be the same eruption as that on the skin.

Dr. Leartus Connor, Detroit—It is a question whether the eye complications were due to the general eruption or to streptococcic infection. It would seem in these cases that it was due to the infection, and if so, measures can be taken to prevent it. We have had some mild cases in Detroit, but I have not heard of an eye being lost from this cause. It may be due to the fact that at periodical intervals the whole city has been thoroughly vaccinated. We have lately been made to believe that this was illegal, but formerly it was not considered so, and general vaccination prevented an epidemic. I am convinced that in this, as in allied diseases, we shall fail of best results until we teach the people that vaccination is absolutely necessary. Dr. Baker's observations increase the force of our argument. If we can show that even though the lives of patients are saved, they may be blind, or partially so, we may be able to get the laity to listen to us. The only thing we can do is to promote organization and teach the people such facts as these presented to-day. How much the discovery of the smallpox organism by Dr. Councilman will affect this matter is still undetermined.

Dr. B. H. Mann, Texarkana, Ark.—I have treated perhaps five or six cases of corneal ulcer following smallpox, with loss of eye in two cases. Treatment seemed to have no effect whatever.

Dr. John A. Donovan, Butte, Mont.—As to the question of primary or secondary infection being cause of ulcers, in an extensive epidemic two years ago I saw some cases where primary eruptions occurred on the cornea simultaneously with the skin. These all healed readily when treated with boracic acid wash and yellow oxid ointment. These severe ulcers with iritis, etc., I treated were all due to secondary infection. Light cautery punctures in the margin of healthy tissue around the ulcer is the most efficient treatment.

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[2] Diseases of the Eye, p. 433.

[3] Denver Medical Times, December, 1901.

[4] Ophthalmic Record, July, 1902.

DR. R. W. MILLER, Los Angeles, Cal.—The statistics are indeed instructive, and come to us with a great deal of force. They have the merit of freshness, and may be more helpful to us in bringing the laity to a realization of the dangers of smallpox and the benefits of vaccination than the older statistics. We have to go back but a few years in order to obtain abundant statistics which should convince anybody. In spite of this, however, we find people opposing vaccination. In Los Angeles a few years ago mass meetings were held by antivaccinationists opposing vaccination, and these meetings were headed by the editor of one of the daily papers, who refused to have his own child vaccinated so that it might continue to attend the public school.

As suggested by Dr. Connor, we may hope for better things when the profession is more thoroughly organized. The adoption of suitable resolutions and the bringing to bear of concerted influence on the legislatures and health boards will enable us to accomplish more than we have done in the past. There is no question as to the growing sentiment against vaccination in this country, and the only thing perhaps that will convince the public will be a fearful epidemic of smallpox.

I have seen but few of these cases, but I think with Dr. Donovan, that if the ulcer is limited, the cautery is the best means of treatment. As to the applications of medicines, we can often accomplish more by frequent cleansing with the milder agents than by the more irritating agents.

DR. OSCAR DODD, Chicago—I have seen several cases in Chicago at a late stage, after the corneal lesions had healed. Our cases were very mild. I would like to ask Dr. Baker if the corneal complications came on during the stage of eruption or are a later infection.

DR. E. P. MORROW, Canton, Ohio—Dr. Baker mentions a case that occurred in my practice.[1] The eye trouble occurred before the general eruption occurred, and I look on it as the inoculation lesion of smallpox. The patient, about two weeks before, had slept with his cousin, who was supposed to have chicken-pox. The next day in shaving himself he used the same mug his cousin used, and probably got some lather into the eye. Seven days before the general eruption occurred he presented himself with a slight conjunctival hyperemia, limited almost entirely to the lower half of the eyeball. There was a decided white spot, 3 mm. in diameter, on the hyperemic area between the corneal limbus and the caruncle, and in the center of this spot a distinct black dot. I sent him home, assuming the trouble to be insignificant. The next day he presented himself with greatly swollen lids, having the appearance of a case of purulent conjunctivitis; on separating the lids, however, there was no discharge. There was, however, a subconjunctival swelling in the lower half of the bulbar conjunctiva, while the upper half of the cornea and conjunctiva were not involved at all. Until the end of the case there was no discharge. On the seventh day he had a general eruption, which proved to be smallpox. The eye went on to recovery, although there was a slight involvement of the cornea. There was haziness of the lower portion of the cornea, but under irrigations with boracic acid and the use of hot fomentations the eye recovered without any serious damage. I believe this to be a case where the conjunctiva was the initial point of inoculation of smallpox.

DR. D. A. THOMPSON, Indianapolis—During the past year we have had a siege of smallpox, and I saw a number of conjunctival cases, one a severe episcleritis. In the confluent form there were ten cases of ulcer, of which four were lost. It was demonstrated in our cases that vaccination plays an important part in mitigating the trouble.

DR. ALLEN GREENWOOD, Boston—It is reasonable to expect that Dr. Councilman's discovery will bring about a new method of treatment, and that we may possibly be able to control this condition as we do the diphtheritic conjunctivitis by an antitoxin.

DR. F. W. HILSCHER, Spokane, Wash.—I would like to report a case similar to that of Dr. Morrow's, in which there was conjunctivitis near the limbus before the eruption of the disease appeared. I treated the patient about a week before the eruption broke out. It had the appearance of a phlyctenular conjunctivitis. At the end of about a week he seemed depressed and had a little fever and general malaise, and I suspected smallpox, and called in a health officer and turned the patient over to him. It illustrates also the value of isolation. The patient was from just outside the city limits. We had an efficient city official, but a rather negligent county physician; the city remained comparatively free from the disease, and the cases in the city could be traced in nearly every instance to infection from the county outside the city limits.

DR. JOHN E. WEEKS, New York—The discussion has brought out that the affection may sometimes be primary in the eye. I had thought that perhaps in all the cases the infection was a secondary one, and due to the entrance of substances from the lids or brow after abrasion of the corneal epithelium. I have not had experience in the treatment of smallpox, but it seems to me that the use of oily preparations to prevent the scattering of the exfoliations would be of service in preventing secondary infection of the eye; oily preparations, with perhaps an antiseptic added. In regard to the complications that may follow, I have seen cataract as a result of corneal ulcer following smallpox.

DR. ALBERT R. BAKER, Cleveland, Ohio—I believe in all cases the eruption appears on the mucous membrane just as on the skin, and probably in all there was a primary eruption of the mucous membrane of the eye. The eye is so greatly swollen in confluent cases that it is difficult to tell. It is impossible to open the eye to examine it for several days. But for all practical purposes these cases of bad infection are secondary, and the infection is conveyed to the eye by means of the fingers, or in some similar way. We used vaselin, as suggested by the Chairman, in all these cases. As to the primary infection as in Dr. Morrow's case, the only one that in any way resembled that was the case of Dr. Smith, in which there was a vaccine infection carried from the arm to the eye.

The general condition of these eye patients was pitiable indeed. Even with good nursing in many of them you could pick up the crusts from the bed in handfuls weeks and months after the case was discharged from the hospital as cured.

As to the chart, you will observe that it keeps running up gradually until we were having 85 to 88 new cases reported a week, with 15 to 20 deaths. Our health officer was still disinfecting. We were threatened by quarantine by all lake cities, and then our business men became alarmed and called in the State Board of Health, who insisted on general vaccination, appointed 250 public vaccinators and vaccinated over two hundred thousand people within a week, and the epidemic was almost immediately ended, as shown by the chart.

CRAMP OF THE CILIARY MUSCLE DUE TO EYESTRAIN.*

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As every physician should have a knowledge of what is known as professional cramp, a painful spasm of the finger, hand, forearm or arm from excessive use, as is often found in writers, telegraphers, pianists, violinists, typewriters, etc., so should every oculist have a knowledge that certain eye muscles, especially the ciliary, are liable to the same condition when subject to enforced contraction for prolonged periods of time.

No oculist who does much fitting for glasses has failed to notice that, although the greatest care has been observed in this part of his service, occasionally he will meet a case where it is impossible to obtain satisfactory results and relieve the annoying nervous symptoms that usually accompany refractive error, although under the effects of a cycloplegic the very best possible vision has been obtained. Such patients are usually between the ages of 25 and 40 years, although cases much younger are occasionally encountered.

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[1] Ophthalmic Record, July, 1902.

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

When the patient returns to us with the complaint that he is not relieved of his headaches or whatever nervous head symptoms may have been attributed to eyestrain, and that his vision has not been improved, we apprehend that a too high or a too low correction may have been made, or that there may have been a slight deviation from the exact angle in the correcting cylinder for the astigmatism, all of which has been carefully gone over, and allowances made from time to time, without appreciable benefit to the patient.

Should the patient have been long a sufferer from the headaches and eye pains which are usual in refractive errors, especially if there is an astigmatism, the correcting lenses may have relieved him for a short time, to some extent, but not entirely, and many of the old annoying symptoms return, although perhaps in a mitigated form. This condition is known as ciliary cramp.

THE CAUSES OF CILIARY CRAMP.

1. An emmetropic eye may have cramp of its ciliary muscle. Too much near-work leads to it. Impairment of the general health will augment it, but the cramp may exist in an emmetropic eye when there is good health from too much near-work.

2. The ametropia conduces to it, especially hyperopia and astigmatism, whether hyperopic or myopic. In mixed astigmatism there is great predisposition to the cramp with a tendency to headaches and eye pains. This may be attributed to the unequal contraction of the sphincter fibers in order to obtain a clear retinal image.

It is well understood that accommodation depends on the contraction of the circular fibers of the ciliary muscle and the elasticity of the crystalline lens. When there is normal refraction of the eye and but an ordinary amount of work for the muscle to perform, and the patient is in fair health and is not suffering from some affection that would impair the general muscular tonicity, the eye performs its functions instinctively—not reluctantly—but with a natural impulse and without effort. If, however, there is an excessive amount of near-work to perform, or there is general impairment of muscular tonicity, although the refraction may be normal or made so by correcting lenses, the ciliary muscle is liable to become cramped from the excessive effort to contract.

If the eye is hyperopic or astigmatic, with these conditions existing, then the ciliary muscle must become inordinately contracted in its effort to perform but an ordinary amount of work. If the eye is myopic and uncorrected, the ciliary muscle, not being called on to perform much service for near-work, soon loses its tonicity for want of action; for this reason should an exigency require that the myopia be corrected to facilitate distant vision, the patient is unable to accommodate for near-work, or if so, very reluctantly and ineffectively. The weakened condition of the muscle, rendered so for want of use, readily conduces to cramp.

In high degrees of uncomplicated and uncorrected myopia there can not be cramp of the ciliary muscle, but it is found in low degrees of this refractive condition and in high degrees, where full, or quite full, correcting glasses are in use. If myopia is corrected early, the ciliary muscle may regain its normal functions, and is then liable to become cramped from overwork, as does that of the emmetropic eye.

I anticipate the fact that there are those who are skeptical with regard to ciliary cramp. They term it hypertrophy of the ciliary muscle. I believe there is hypertrophy of the ciliary muscle, but it is readily diagnosed from cramp.

When there is cramp of the ciliary muscle it is temporarily relaxed by the use of a cycloplegic, and if the patient is subject to headache, due to eyestrain, it is relieved as soon as the cycloplegic has relaxed the accommodation. We have all had patients who were suffering from headache at the time they consulted us, who, as soon as their eyes were placed under the effects of a cycloplegic, found that their headache had entirely disappeared.

In hypertrophy of the ciliary muscle there is no strain and consequently no cramp, for the muscle has become permanently fixed, and, therefore, ineffective as far as contraction and relaxation are concerned. The patient with hypertrophy of the ciliary muscle can usually see well for near-work, because the muscle has become permanently contracted and is fixed for near-work only, but can not see well for distance, and because of the permanent convexity of the lens is practically myopic, and for distance requires a concave lens to make perfect vision. When the muscle becomes hypertrophied and the lens permanently fixed for near-work, the range of accommodation is necessarily very limited, and the patient has passed the point where he suffers from cramp.

I can conceive a hypertrophied condition of the ciliary muscle where the sphincter and radiating fibers may be increased in size and strength and their functions still maintained, to attain which would require a systematic exercise of both sets of fibers, which no ordinary avocation could possibly accomplish.

The cramp of a muscle is an evidence of its weakness. When a muscle is compelled to remain in a fixed position for long periods of time, it becomes weak, simply from the exertion necessary to maintain this fixed position, whether it has been held there by mechanical means, as to allow a fractured bone to unite, or voluntarily, as with the contracting fibers of the ciliary muscle in the act of near-seeing. After the protracted contraction of a muscle, the tendency is to keep more or less contracted, and when through necessity it must relax, pain accompanies the effort.

Cramp of the ciliary muscle is not constant, although the conditions which produce it may be present. As before stated, it may occur in an eye whose refraction is normal, simply because the eye is overworked. One of the first symptoms of ciliary cramp, aside from headache and pain in the eye itself, is that vision for distance is variable. At times the patient may have good distant vision, but on the least exertion at near-work the cramp returns with great severity, and the patient suffers accordingly. It is this tendency of the ciliary muscle to return to its old condition of contracting that gives the oculist so much concern after he has properly fitted his patient with glasses.

TREATMENT.

The treatment which has been most successful with me in cases of ciliary cramp consists of cycloplegics, and for several reasons I believe that those whose effects are transient are much better than those whose effects are prolonged, like from atropin. The first reason is that most patients are compelled to continue regularly their daily avocations. The second reason is that prolonged relaxation of the muscle is injurious, because long-continued inaction of the muscle will, of itself, have a tendency to weaken it, in which condition it will readily cramp again if the patient is compelled to use the eyes for enforced near-work.

As a transient cycloplegic, and one, too, which will effect thorough relaxation of the accommodation, I am partial to a combination of equal parts of a 1 per cent. solution of homatropin and a 2 per cent. solution of cocain. The cocain seems to augment the effects of the homatropin, besides, its analgesic effects have a special bearing with patients who suffer much, as many do, from the pain attending ciliary cramp.

To relax the accommodation preparatory to fitting for glasses I instill one drop of the above solution in the eyes every ten minutes until five applications have been made. In ten minutes after the last application the accommodation is usually relaxed to its utmost extent, when the fitting may be proceeded with, which must be concluded within two hours, for at the end of this time the cycloplegia usually begins to pass off.

To relieve ciliary cramp, I instill one drop of this solution into each eye on retiring for the night. The patient is usually able to attend his work, whatever it may be, the next morning, should he retire at a seasonable hour. It requires about ten hours for the cycloplegia to pass off, when the muscle will usually be able to perform its functions readily.

I prescribe this remedy daily, at the time indicated, whenever and as long as there is evidence of cramp. Frequently but one eye is affected, when it can be treated alone. My rule is to use the remedy on retiring, only when the patient has suffered during the day, and with those only whose eyes are emmetropic or made so by correcting lenses under the effects of a cycloplegic.

Gelsemium has an excellent effect on ciliary cramp. This drug was brought to my attention by a physician, who referred to me a lady who had been a great sufferer from hemicrania, due to eyestrain, and whom I fitted for glasses. Although the patient was greatly relieved, she still suffered occasionally from headaches, especially after the eyes had been used for a long period at near-work. For this the physician gave her the following prescription, which gave her immediate and permanent relief, although she had taken the same prescription before she was fitted with glasses with only transient effects. It was a favorite prescription with him for headaches:

℞.	*Morphia sulph.*	gr. i	065
	Liquor potassi arsenitis.		
	Tinct. gelsemium (green root), āā......	ʒi	4
	Elixir simp., q. s. *ad*..................	℥iv	120

M. Sig.: One teaspoonful every six hours until headache ceases.

I prescribe his remedy in persistent headaches and eye pains only, and then only in connection with the cycloplegic, as previously indicated, and that after the cycloplegic has failed to give permanent relief.

The physician always insisted on the green root tincture, and not without cause, for I have found that the tincture of this root of the shops is usually worthless. I have prescribed the gelsemium alone, but never with the satisfactory results as in the combination given.

Knowing the therapeutic effects of morphia and arsenic in a general way, we readily comprehend their effects in spasm of muscular tissue; but of gelsemium I would say that it has a specific effect on cyclospasm that is worthy the considerate attention of every oculist.

DISCUSSION.

Dr. Edw. Jackson, Denver—We are too apt to feel that the only question to be settled is whether there exists a spasm of accommodation and its amount. It will be productive of a better knowledge of the subject if we go a little deeper into these cases. There are totally different conditions capable of yielding the same alteration of refraction. There may be, and probably is, a condition of surplus accommodative power in some young hyperopic eyes that is quite removed from spasm of accommodation from overwork. To consider them the same thing is preventive of our clearly understanding these conditions or treating them properly. We can recognize these and also a third form of spasm that is closely dependent on abnormal conditions of the central nervous system.

The next point is the idea widely held that in very high myopia there is no strain on the accommodation. I do not believe this is correct. The high myope, as a matter of fact, often has the thing he is looking at within his far point, and is straining his accommodation. In reading he must sometimes vary his accommodation 2 or 3 diopters to read lines of ordinary length. High myopia with binocular vision almost constantly entails strain of accommodation. The myopia is seldom equal in the two eyes.

As to the treatment, the important thing is the discovery and removal of the cause, which is generally some uncorrected ametropia or some overwork of the eyes. When that has been thoroughly attended to, in patients of good general health, the condition quickly passes away.

I have used cycloplegics in the way mentioned to some extent, but would be very much afraid of using a 1 per cent. solution of homatropin at night if I expected the patient to use the eyes the next day. I have used a 1/5 per cent. solution, and with some satisfaction; also a solution of euphthalmin, which produces a tendency to relaxation. Recovery from the euphthalmin is complete in ten or twelve hours.

Dr. John A. Donovan, Butte, Mont.—In reference to the treatment of this condition, I have found homatropin to be more or less unreliable. I believe the nearest thing to a total cycloplegic in this trouble is the hydrobromate of hyoscin. My attention was called to it by Dr. Chas. Baker some years ago, and I am convinced that it is considerably the stronger and decidedly more reliable. Towards the end of the week these patients suffer most, and if they use it on Saturday night, by Monday they are able to work again; it takes three or four days to fully pass off.

Dr. Lawrence R. Ryan, Galesburg, Ill.—In regard to the prescription of Dr. Wright's, containing gelsemium, he made the statement that he was never able to get relaxation of the spasm by the use of gelsemium alone. That would seem to militate against its use. It would seem to me that the morphia itself would relieve the spasm quicker than the gelsemium.

Dr. J. W. Wright, Columbus, Ohio—In regard to the use of the solution of homatropin and cocain, when it is used to produce cycloplegia, if instilled four or five times it does not pass off in twenty-four hours, but if only used once, on retiring, it passes off by the next morning.

Knife and Fork Surgery.—The *Hospital* discusses Koenig's method of operating without ever touching the tissues, much as we eat our meals by aid of forks and spoons instead of clawing our food. By practice with suitably-devised metal instruments, Koenig of Berlin has found that he can get through many operations without ever touching the wound. Even in abdominal cases, in many of which it is often impossible to avoid introducing the hand, he carries his instrumental method to its extremest limit. In operating on cases of appendicitis during the quiescent interval he has been able to do the entire operation with instruments. The surgeon often does things with his fingers which, by aid of a little practice, could be done just as well with an instrument, and, if we are to accept as correct all that is said about hand-infection, it would often be well, in suitable cases, to adopt the "knife-and-fork" method.

OCCURRENCE OF THE STRONGYLOIDES INTESTINALIS IN THE UNITED STATES.*

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BALTIMORE.

I present for your consideration a somewhat brief and imperfect account of one of the rarer nematodes; rare, at least in this climate and latitude, though occurring with considerable frequency in tropical and sub-tropical countries. I refer to the *Strongyloides intestinalis*. The parasite is endemic in Cochin China, where it occurs in association with the diarrhea peculiar to the country—hence the name bestowed on it by European physicians, "Cochin China diarrhea."

This animal forms one of the class of parasites whose pathologic action is limited to the intestinal canal, and does not extend, as does that of the *Amœba coli,* to the liver and other organs. Teissier has claimed to have observed rhabditiform embryos circulating in the blood, and to have produced metastatic foci in the lungs of infected frogs. These observations, however, have not been confirmed by any other observer, and, for the present, we must conclude that the parasite's pathologic influence is limited to the gastrointestinal tract. The consideration of the diseases caused by animal parasites, particularly those infecting the intestinal canal, is especially opportune at this time, as the different varieties of acute and chronic diarrheas and dysenteries are only now beginning to emerge from the obscurity which has previously enveloped them, and are being placed on a rational basis, where the knowledge of them previously was wholly crude and empirical. This knowledge has already borne valuable fruit; you are familiar with the work recently done under the direction of Professor Welch, of Baltimore, in the investigation of the summer diarrheas of infants, of the discovery of the essential cause, and of the preparation of a serum which promises a specific against a disease causing more than one-half the mortality in urban communities during the summer months.

It is only in the last decade that we have begun to realize that many cases of chronic intestinal flux in this latitude are due to the *Amœba coli,* and one form of parasite which we previously considered wholly indigenous to the tropics, has thus been given a wide sphere of activity in the diseases of temperate climates. We have later been able to recognize the cause of another class of diarrheas through the discovery by Shiga and Flexner of the *Bacillus dysenterica,* and it is probable that many other tropical parasites will be found to be the pathogenic factors of our native diseases. The rôle played by the strongyloides genus in diseases of the United States is hard to ascertain at the present time, but I do not believe it will ever be a prominent one in this climate, yet it will take a place as an etiologic factor in many individual instances in which the nature of the disease was previously unrecognized. The occurrence of the *Strongyloides intestinalis* in the United States was first reported by Thayer[1] from three cases occurring at the Johns Hopkins Hospital, Baltimore, his work remaining the best monograph published on the subject in the United States.

A short résumé of the history of the parasite may here be of interest:

In 1876, Normand, a medical officer of the French navy, while investigating the diarrhea among French troops returning from China, discovered this parasite in the stools. It was studied by Bavey in the same year, and the latter named it *Anguillula stercoralis*. in analogy with the similar terrestial anguillula *Rhabditis terricola,* genus leptodera. The parasite is found constantly in the stools of these patients, and Bavey and Normand considered it the probable cause of Cochin China diarrhea. When these stools were kept warm for four or five days, sexual development took place, some of the parasites assuming the male and some the female type—the original first observed being, indeed, only an embryo. The following is Bavey's description of the sexually mature forms:

> The length of the female is about 1 mm. fully grown, the breadth about 0.04 mm., body cylindrical, slightly diminishing in size anteriorly and tapering to a sharp point posteriorly. When the worm retracted forcibly, slight transverse furrows were to be seen. The mouth possessed three distinct lips and was continuous with the triangular esophagus, which after a stricture dilated again to a second ovoid enlargement. The intestine which followed was fairly visible and ended in a little protrusion on one side of the body near the base of the tail. The intestine was pushed slightly aside by the uterus. A little below the middle of the body on the ventral side opened the vulva leading to the uterus, which extended from the intestinal ventricle to a point near the intestinal opening; here the eggs were massed in varying numbers. In some instances the young had actually broken the shells and were free in the uterus, though more often the eggs on deposition contain well-formed motile embryos.
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> The male is about 1/5 smaller than the female; the peri-intestinal cells are more clearly outlined and were accompanied by another long gland, which seemed to consist of small rounded globules. This organ, doubtless the testicle, entered the base of the tail in two small horn-like spicules with tapering extremities curved inward; these spicules contained canals . . . coiled in the same direction . . . and were twice as short.

In the following year a complication occurred in the history of the parasite, with the discovery by Normand of a nematode in the small intestines of a patient dead of Cochin China diarrhea. This was similar to the parasite found in the stool, but larger than even the sexually differentiated forms, and possessing other structural differences. Bavey was able to obtain it from several successive autopsies following death from this cause. He considered it a distinct species, which he called the *Anguillula intestinalis*. It was found only in the female form and was described as follows:

> Length 2.20 mm., average breadth 0.03 mm., the body little tapering anteriorly, terminated rather suddenly posteriorly in a conical tail, the extremity of which appeared rounded and even a trifle dilated . . . . the surface showed a delicate transverse striation; the mouth . . showed three small lips. It opened into an esophagus, practically cylindrical, which occupied about ¼ of the length of the animal, and showed neither swellings nor striations; it was followed by an intestine with which it might readily be confounded without a marked change of color. This extended almost to posterior extremity of the body, but it ceased to be visible in the middle part, which was occupied by a very large elongated ovary. The vulva was situated in the posterior third of the animal and in its neighborhood the uterus contained five or six elongated eggs . . the eggs and viscera were of a yellowish green color and rather opaque and apparently finely granular.

The parasitic form is found at autopsy in the small intestine. They are abundant in the duodenum, less numerous in the jejunum, and absent in the ileum. They seldom reach the stomach under normal conditions, but have been found in the vomitus after an emetic. In tive. The abdomen was not distended. The spleen was not palpable. No enlargement of the liver.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank A. Jones and W. S. Thayer.

[1] Journal of Experimental Medicine, vol. vi, No. 1, Nov. 29, 1901.

The patient entered the hospital July 7 and was put to bed and given a liquid diet. The only medication given at first was bismuth. Later the patient was, on two occasions, given thymol gm. 2 (gr. xxx), the dose being repeated after an interval of one hour, and following this an active purge. Male fern was given in like manner in doses of one dram.

The patient's symptoms improved greatly and he gained twenty pounds in weight. He was discharged at his own request August 26. The stools on discharge still contained moderate numbers of the rhabditiform embryos of the parasite.

Case 3.—*History.*—A native of Maryland, who had never been out of the state except on an occasional visit to Washington. J. S., a farmer, was admitted to the Johns Hopkins Hospital July 19, 1900, complaining of diarrhea and swelling of the feet. The patient had been a farmer all his life; his habits have been good; he has had no serious illnesses except chills and fever fifteen years before entry. He had considered himself a healthy man up to six months ago, when he began to suffer from diarrhea and progressive weakness. The stools, very frequent and sometimes involuntary, were fluid, but never contained blood. They were small in quantity. During the two months before entry the patient had on several occasions vomited a yellowish fluid. For two days he had had sharp, griping pains in the lower abdomen. For a month there has been edema of the feet and legs. . . . . During the last two months he has lost considerably in weight and much in strength.

Physical Examination.—Moderate atheroma of the radial, slight abdominal distension and flatness in the flanks. On examination a moderate number of characteristic rhabditiform embryos of the *Strongyloides intestinalis* were found, together with a few red blood corpuscles and large numbers of leucocytes. The temperature was slightly elevated, 100.6 F., on entry, but with the exception of an occasional rise to a point between 99 and 100 it remained subnormal during the greater part of the patient's sojourn in the hospital.

On entry the patient was given a milk diet and powders of tannogen and bismuth subnitrate, q. 4 hours . . . . on April 12 . . . he was given thymol, gr. v. q. 4 hours . . . . on August 13 the thymol was discontinued and four doses of santonin were given at hourly intervals. . . . the patient was considerably better. There was a gain of 21½ pounds in weight between July 29 and September 17, the date of his discharge.

The blood examination from all three of these cases showed moderate anemia, the hemoglobin in the first case of Thayer's series registered 48 per cent., and in Case 3 of this series 57 per cent.; in both of these cases, however, there were complications present; the first case was complicated by amebic dysentery, the last case with a probable renal sclerosis. The high leucocyte count observed in the first case is easily accounted for by the amebic infection. The presence of a hyperleucocytosis in Case 3 is hard to account for; the one count made showed 21,500 leucocytes to the cubic mm.; unfortunately, no further count was made. None of the three cases showed any eosinophilia. The differential count in the first case gave:

Polymorphonuclear leucocytes	88.3 per cent.
Small mononuclear leucocytes	7.5 per cent.
Large mononuclear leucocytes	2.4 per cent.
Transitional forms	1 per cent.
Eosinophiles	.3 per cent.

The blood count showed 3,412,000 r.b.c., leucocytes 32,100; hemoglobin 48 per cent. Twelve days later the eosinophiles had fallen to 0.1 per cent., and the leucocytes to 30,000. The *valeur globulaire* was little affected, the blood generally showing the changes similar to all secondary anemias resulting from loss of blood.

Thayer's second case is of much interest on account of the occurrence of a number of eggs in the stools. This is very rarely observed in infection with the *Strongyloides intestinalis* unless there also be present an uncinarial infection.

After the report of Thayer's cases no further cases were observed until the middle of 1902, when two cases were discovered within a few months of each other; one occurring in the practice of Dr. Moore at Galveston, Texas, the other case occurring at the University Hospital in Baltimore in my own service. This case I wish to describe in some detail:

Case 4.—*History.*—Entered the University Hospital July 25, 1902, complaining mainly of a chronic diarrhea, which had lasted about five months. The movements varied from about 2 to 15 daily; average was about 10 to 12. Operations were painless and were not accompanied by tenesmus. Alvine discharges were watery and contained mucus. There were occasional slight griping pains in the abdominal region. Patient had lost about 15 pounds in the last three months. Occasional sweating was present, both at night and during the day and accompanying this mild rigors. There had been slight cough lasting about two years, and occasionally sharp pains have been felt in the chest. The patient was operated on about two years ago for fistula in ano. He lost two sisters from pulmonary tuberculosis, and his father died of the same disease at the age of 20.

Physical Examination.—Patient is a well developed man, rather thick set, of excellent physique with a clear, ruddy complexion, but with some slight pallor of the mucous membranes. Height 5 ft. 6 in. Weight about 135 lbs. His previous regular weight has been about 145 lbs.

Eyes.—Clear and bright, pupils react readily to light and accommodation. Palpebral mucous membrane a trifle pale. Lips showed some pallor and a faint cyanosis. Tongue was pink, moist and clean . . . . moderate enlargement of tonsils . . . no other glandular enlargement. . . .

Chest.—The thorax is large and well formed, costal angle about 45 degrees, expansion fair, equal on both sides. Both supra- and infraclavicular fossæ are well filled. Apices of the lungs rise about ¼ inch above the clavicles. There is good resonance over both clavicles and over the anterior thorax. Expiration a trifle prolonged . . . a few sonorous râles were heard . . . at the right apex posteriorly the respiratory murmur was roughened and the sonorous râles more numerous and an occasional clicking sound was heard. The voice sounds are considerably exaggerated. On percussion there is slight diminution of resonance and a slightly elevated pitch.

Heart.—Situation of the apex beat is normal, cardiac sound is clear, both at the apex and base.

Abdomen.—Hepatic flatness begins at the sixth rib and extends about ⅛ inch below the costal margin. The liver and spleen are not palpable. Abdomen is soft, no tenderness or tympanites. Lymphatics somewhat enlarged. . . . .

There were several possible conditions to be considered as the essential cause of this diarrhea. The tubercular history with the history of fistula, the occurrence of slight rigors and sweating with cough lasting two years, rather indicated a tuberculous process with ulceration of the bowel. The excellent physical condition of the patient, absence of emaciation and of glandular or peritoneal involvement were at once sufficient, however, to negative this assumption. It is seldom that extensive tubercular ulceration lasts more than a few months without some local or general peritoneal involvement. The long periods of remission are also antagonistic to this assumption. The absence of pain, the long remissions and liver enlargement, together with slight rigors, suggested an amebic infection. On examination of the first specimen of stool, however, a single parasite was observed. This parasite was very sluggish and its movements only lasted about half an hour, and owing to this fact, and to the examination being made at night, it was not possible to determine accurately its characteristics, but it appeared to be an uncinaria.

Examination of the Stools July 29.—Stool of semi-solid consistency, brown in color, odor not especially marked.

Microscopic Examination.—Red blood and pus cells abundant—fine granular detritis—few starch granules (in addition to the parasite already described).

Treatment.—The next day the case was seen in consultation with Drs. Thayer and Atkinson, and on passage of the rectal tube Dr. Thayer was able to find a number of the rhabditiform embryos of the *Strongyloides intestinalis*. The patient was put on liquid diet for twenty-four hours, and then on soft diet, and was confined to bed. The only medication given was small doses of quinin. Under rest and diet the symptoms abated greatly. The number of daily movements averaged about the same, but the involuntary evacuations of the bowels at night ceased.

Examination of the Stools August 2.—Granular detritis, pus and blood cells diminished; numerous motile and non-motile bacteria.

The stools were now examined daily. The occurrence of the parasites was very variable; occasionally the fecal drop would contain five or six specimens and at other times none would be found after a careful search through a number of specimens lasting two hours. The greatest number found in any drop of fecal matter did not exceed ten or fifteen. There appeared to be a constant relation between the number of parasites and the number of bacteria occurring in the stool. When there were *no* bacteria evident, on microscopic examination, the search for parasites proved futile; on the other hand, stools containing large numbers of bacteria usually contained numerous parasites. Nearly all the softer stools contained both bacteria and parasites. The stools, both microscopically and macroscopically, showed the presence of an intestinal indigestion. They contained during all of the diarrheal relapses undigested food, and the odor was usually offensive. In one instance fermentation had occurred, and bubbles of sulphuretted hydrogen were being given off rapidly. This specimen contained numbers of parasites.

A certain technic is necessary in the examination of the stools, and in the cultivation of the other forms of the nematode, especially if the endeavor is to be made to cultivate the sexually differentiated forms.

The stools as soon as passed should be placed in open vessels and kept at room temperature. It is best to divide the stool into three portions so as to observe the parasite under varying conditions. One specimen may be placed on the top of the sterilizer, one beneath and one at room temperature. A little normal saline solution may be added to the stools of the more consistent kind, the embryos having a tendency to collect in this portion. For examination, a considerable dilution of the drop is always necessary, otherwise the embryo, being almost transparent, will escape observation. It is best to commence the examination with the ¾-inch objective, and reduce the light somewhat.

Examination of the Blood August 10.—An examination of the blood was made August 10 with the following result:

Hemoglobin	82 per cent.
R. B. C.	4,672,000
Leucocytes	7,800
V. G.	0.88

A marked eosinophilia is present.

This moderate anemia gradually improved with the improvement in the general condition. The leucocyte count was practically normal, and never at any time showed a marked increase.

An eosinophilia was present sufficiently marked to be plainly evident on the examination of the fresh blood. Eosinophilia is not a symptom generally observed in intestinal infection with the *Strongyloides intestinalis*, and its presence in this case suggested strongly a condition of mixed infection frequently observed, viz., where the strongyloides and uncinaria are cohabiters of the intestinal canal. This condition strengthens the possibility that the first specimen observed was really an uncinaria. The eosinophilia in these cases frequently persists after the anemia and other symptoms have disappeared and the parasite has apparently been completely eradicated. A differential count was made some days later by Dr. Rankin, resident pathologist to the University Hospital, and he examined several stained blood smears at the same time:

QUANTITATIVE:		
R. B. C.	4,736,000	
Leucocytes	7,860	
DIFFERENTIAL COUNT, LEUCOCYTES:		
Polymorphonuclear	250	47.5 per cent.
Small mononuclear	157	29.6 per cent.
Large mononuclear	50	9.5 per cent.
Transitional	8	1.1 per cent.
Eosinophiles	61	11 per cent.
Cells counted	525	

Qualitative.—Red blood corpuscles show little change. No poikilocytosis and corpuscles uniform in size. Slight pallor. White blood corpuscles, polymorphonuclear leucocytes, show every variety of degeneration. (*a*) There is increase in eosin staining. (*b*) There is loss of neutrophilic granules. (*c*) There is vacuolization, fragmentation and loss of outline in the body of the cell. (*d*) Nucleus is enlarged, paler and shows clear vacuoles—hydropic degeneration. (*e*) Perinuclear basophilia marked. The nuclei also show supernumerary lobes in many cells. Small mononuclears vary considerably in size, are more granular and the nucleus often irregular. Large mononuclears much increased, show marked degenerative changes, principally in an increase in granules and considerable hydropic degeneration. The nuclei of many of these cells are much fragmented and many look as if they were undergoing karyokinesis. Eosinophiles vary considerably in size and in number of granules contained; but all the granules are uniform in size and of equal staining power. No iodophilia.

On August 21, commencing at 11 a. m., the patient was given thymol, grs. vii, every five minutes until twelve doses were given, the patient receiving in the hour gm. 12 (180 grains).

The patient had some abdominal pain and griping, not enough to give him any serious inconvenience, and experienced some slight nausea. He was freely purged, and eight specimens of the stools were obtained, containing an abundance of undigested food. Any further purgation was considered unnecessary. The patient was given no food for twenty-four hours previously. The specimens of stool contained numbers of embryos, all of which were dead. No specimens of the parthenogenetic worm were observed.

One week later the same treatment was repeated, thymol being again given in heavy doses and following this a purge. In the evening an enema of sol. of quinin was given (1 to 1000).

After this treatment the patient improved considerably and was able to resume house diet. Examination of the stools, however, showed actively motile rhabditiform embryos, though in diminished numbers. The patient was now much better, and during my absence from the hospital he was discharged.

He disappeared from view until the beginning of April of this year. He had gone over to Washington, where he sometimes lived, and experienced a severe relapse. He gave his history in one of the Washington hospitals, and learning that he had been treated for a "foreign worm" a specimen of the stool was sent to Dr. Stiles, who found numbers of embryos in it. Since then Dr. Stiles has made systematic examinations of the stools in about 150 cases, and has succeeded in adding to our knowledge of the occurrence of the parasite in this country, five additional cases.

(The conclusion of this article will appear next week with the two articles on the same general subject by Drs. Henry B. Ward and Claude A. Smith.)

To administer quinin to children, according to a French pharmacist, mix 1 gm. (15 gr.) of the sulphate in a mortar with 8 gm. (2 drams) of olive oil. Twenty drops of this mixture will contain 5 centigrams (¾ gr.) of quinin. The mixture is poured into a tablespoonful of sugared milk, and will be easily swallowed.—*Indian Med. Record.*

SHOULD THE TUBERCULOUS PATIENT KNOW THE TRUTH REGARDING HIS CONDITION?*

C. P. AMBLER, M.D.
ASHEVILLE, N. C.

All physicians who practice at health resorts frequented by patients suffering from pulmonary tuberculosis find that comparatively few of these patients have any conception of their real condition, and in the rarest instances have they been carefully instructed as to the necessities for recovery.

The profession generally seems to be of the opinion that tuberculous patients should not be told the nature of their trouble, but the average tuberculous patient generally finds out the true nature of his disease, and when he does he loses faith in his physicians, and frequently, very justly, will censure them for not telling him the truth.

How is it possible to get the coöperation of the patient; to have him use care in the disposal of expectoration: to avoid violence and over-exertion in exercise, and many other things so important in the detail management of the case, if he does not even know that he has a serious trouble with which to deal?

The truth may depress him; probably it will for a short time, but it will not do him near the harm that his ignorance will result in, if he does not appreciate his condition. Every state and municipality is awaking to the danger of infection from the dried sputum of tuberculous patients. Our journals are full of papers advocating antispitting ordinances, institutions for the tuberculous poor and other safeguards intended to protect the public. But why, pray, should we have ordinances and legislation unless the patient is always to know the truth? Legislation we need, but we first need more candor on the part of the physicians.

Formerly a diagnosis was only made in the advanced cases. The patients all promptly died. Result: the laity watched these cases and observed, "they all die." But little idea was ever entertained in those days of the danger to others. We, as physicians, by our tardy diagnosis, have educated the public to the belief that the disease is uniformly fatal.

It is the duty of the physician to explain to the patient the dangers to himself and to others; to point out where he is most apt to make mistakes; to give explicit directions regarding his hygienic life, including diet, exercise, work, physical or mental application, secretion and excretion, sexual relation, and in fact, to go fully into the whole question of the hygienic life. Such instruction on the part of the physician is much more important than the prescribing of drugs with an idea of "cure" in this disease. These instructions and directions should apply to the incipient as well as the advanced cases. To get the coöperation of an incipient case (and his coöperation is of the most vital importance) he must know the truth.

The patient should thoroughly understand the possibilities of communicating the disease to others, and also that he can infect sound tissues in his own lung if he is not careful in following directions for disposal of expectoration. How can we expect care on his part if he does not understand the danger, both to himself and his friends? Many will use care on account of their friends, and others more selfish can only be appealed to with good effect when they realize that they endanger themselves.

The laws of health demand that the patient fully realize the danger to self and others.

Appeal to the patient on the ground that it is unkind to his friends not to make every effort to protect them. If this plan had been followed more in the past the disease would not be so common to-day.

If tuberculosis produced the rapid disfigurement and distress that many of our acute diseases do, or was the active developing disease that smallpox is, we would have quarantined against it long ago. Its slow development makes it hard for the laity to realize that danger exists. Quarantine is unnecessary in tuberculosis, provided the patient is properly instructed and these instructions carried out. The whole country is awaking to the fact that something must be done. We, as physicians, should realize that one-sixth of our death rate each year is caused by tuberculosis; in other words, one-sixth of those who die this coming year in this country will die of this disease. Those who die from tuberculosis the two years following this, in the great majority, already have the disease in an incipient form. It is to their interest to know the truth to-day. It is to the interest of the general public that they know it; that they are fully instructed and cautioned. They consult us for this purpose; it becomes our duty to determine their condition early and so inform them. We have a duty to the other members of a family as well as the patient. Can the state house this great army of patients? Can we quarantine them if we would? No. How can we, as physicians, prohibit the infection of others? By educating the people to their danger and instructing the patient as to his duty.

Is there any way in which the necessary hygienic measures can be secured without the coöperation of the patient? Can we ever get his coöperation unless we tell him that he has a tuberculous disease?

The patient comes to us for the truth. It is our duty to show him that the disease is not the fatal disease that the public have imagined, if instructions be followed. Every physician should keep at hand printed matter, instructions or directions, to put into the hands of the tuberculous patients.

We have for years told our patients that this disease is like unto a fire in a house. If you get after the fire when the match is struck it is easy to put out; let it burn until one whole room is on fire and you have a much more difficult undertaking; let it burn until the house is on fire from garret to cellar and it is sure to burn up.

For the protection of our neighbors, as well as our own property, we all handle fire with care. If a friend's house is on fire would you tell him? A thousand times more important is it to tell him when we find that he is infected with tuberculosis; here the greatest possession he has on earth is at stake. The sooner he knows it the better.

By telling the patient the truth, we may occasionally shorten the days of a few, but in the long run will save the lives of many hundred by following this policy. Our surgeons operate to save life, even when grave danger exists by such an operation to the patient. If our tuberculous patients are not told the truth, the danger is not only to the patient, but to all his friends included.

It is an unpleasant duty to perform, but one from which no physician should shrink; and especially should patients never be sent away from home without knowing their true condition.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank A. Jones and W. S. Thayer.

How frequently are we consulted by some poor soul who had left home and arrived at the resort suffering, as he says, from a "slight throat trouble"; arrived may be in the beginning, and, perhaps, well advanced in pulmonary or laryngeal tuberculosis; without money, expecting to procure work to pay for his board and keep; arriving under the fond delusion that by climatic influence his trouble will soon disappear; with no conception of the necessities for recovery; no knowledge of the gravity of his disease; in many instances his chances were a thousandfold better at home among his friends, had he been told the truth, given explicit instructions, given less medicine and more time by his physician.

The tuberculosis patient who does not know his true condition rarely improves. As his case progresses he becomes discouraged and loses confidence in his medical advisers, thinking they do not understand his case. Can he be blamed?

On the other hand, the patient who is told the truth may temporarily be depressed, but he quickly responds and enters heart and soul into the fight before him. Rarely indeed do we find a patient who has been properly instructed and handled (without misrepresentation) who does not look forward to recovery. Phthisical patients are, as a rule, hopeful. Not so the patient who does not know what is the matter.

Intelligent pulmonary patients sent away from home without being told the truth frequently, from observation alone, find out their condition. When they make this discovery themselves it creates distrust of the physician at home and places the physician at the resort in an embarrassing position, where the truth from him now will reflect on the physician who may have referred the patient to him; or, he likewise must misrepresent the facts to the patient with the result that later he will be censured, with the home physician, for "not finding out what the trouble was."

True, there are exceptional cases where the patient is accompanied by the parent or some one who can control him, when the whole truth need not be given to the patient, but these cases are extremely rare. We have in the past relied too much upon drugs; we have been too free with our prescriptions and too careless in our instructions. If we would give the patients more of our time and less of our dope it would be better for the patient. The good results obtained from institution treatment of this disease are dependent, in a great measure, on the fact that the patients know their condition and are under constant supervision and instruction.

For the good of our tuberculous patients; for the protection of their friends and the public generally; for the protection of ourselves, both physically and from censure, let us fully inform our tuberculous patients as to their disease, and when so informed take the time to properly instruct them what to do and what to avoid.

To secure the proper position of the profession requires its unification, and unification can only be brought about by efficient organization, which, in turn, must be preceded by the enrolling of those who are to be organized. It ought to be made very clear that the man who, being legally admitted to practice medicine, does not unite with the local society places himself in the same relation to the medical profession that a bushwhacker does to an army. That man who manifests no interest in his profession will, in the last analysis, be very apt to forget the proprieties to be exercised toward the individual physician with whom he may come in contact.—Editorial, *Lehigh Valley Medical Magazine*, June, 1895.

THE INFLUENCE OF CONSANGUINITY ON THE ORGANS OF SPECIAL SENSE.[*]

LEE WALLACE DEAN, M.S., M.D.
IOWA CITY.

In treating this subject I have found that I am compelled to confine myself almost entirely to the eye. It presents to us such possibilities for exact investigation that the results secured overshadow those gained from a study of the other organs of special sense.

We have here blood vessels and a nerve with its end organ exposed to view. We can look on mesoblastic and epiblastic tissue. We can observe embryonic conditions if they exist. With the exception of the nervous system, more degenerate conditions are found in the eye than in any other part of the body. As most of the deleterious results of consanguinity are degenerative conditions, we ought to expect this to be a good field for research. You will readily observe that this paper is not a complete treatise on this subject. It has been almost impossible to find literature relating to it. I can only give to you the results of three years of observation of cases and study of them.

It is entirely unnecessary to go into the question as to the influence of consanguinity on organism as a whole. Talbot very nicely answers this question when he says that if the parent stock is perfectly pure there can be no bad results from consanguineous marriage. But if the parent stock is not pure there may be serious consequences. It is so rare to-day to find a perfect parent stock. An apparently perfect stock may not be so because hereditary influences may be quiescent for generation after generation, as is shown by atavism. In order to bring before you the practical side of this subject and its economic importance, I wish to cite some cases. All cases where the name of the observer is not mentioned are cases that have come under my own observation unsolicited in the short space of three years. Some of these cases were reported to the American Academy of Opthalmology and Rhinolaryngology:

CASE 1.—*Male, age 17.* Parents, grandparents, uncles and aunts had no serious eye trouble or degenerate stigmata. Parents were bright, well-to-do people. He has three sisters, Bessie, age 15, who is partially blind; Effie, age 9, whose vision is good, and Grace, *age 4, who is blind.* He has three cousins, one boy and two girls, all in the same family. Of these, Louis, age 16, is almost blind; *Oran, age 19, can not count fingers,* and the girl, age 13, seems to have unimpaired vision. The trouble in each case was retinitis pigmentosa. The fathers of the two families were brothers and the mothers sisters, and the fathers were cousins of the mothers. As the result of these two marriages we have in one family four children, three of whom are partially blind, and in the other family three, two of whom are practically blind.

CASE 2.—Female, age 14. Father and mother have brown hair. Parents were related. There is no history of malformation or other degenerate stigmata in the family. The girl is very large, but weak; she is not intelligent. Her hair is white; iris is a light blue. Examination of eyes revealed nystagmus, V.=6/24. Fundi without pigment. Diagnosis, albinoism.

CASE 3.—Female, age 16. Parents second cousins. Patient's teeth were imperfect. She had but three upper incisors, one root germ not having developed. An examination of eyes revealed V.=fingers in 2 M. Her eyes are so small that she has to hold her lids open with her fingers in order to see. On the right side there is a congenital absence of the iris. In the left eye the cornea is elliptical, being 3 mm. wide in a horizontal direction and 2 mm. in a vertical direction. On this side there is a large coloboma of the iris, one-half of the lower portion being absent.

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[*] Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Pathology and Physiology, and approved for publication by the Executive Committee: Drs. L. Hektoen, F. B. Wynn and W. S. Hall.

Case 4.—Male, age 17. Parents are perfectly healthy. None of his ancestors have shown any signs of degeneracy so far as could be learned. His father and mother were first cousins. He has one brother and two sisters. One of his sisters is an idiot. She has microphthalmos, misplaced ears and other signs of facial degeneracy. The patient is exceedingly simple-minded. His ears are large and placed at right angles to the head. The helix is deformed. His face is covered with a growth of silky hair. The lower jaw is exceedingly small and is retrusive. He has no adenoids, but always keeps his mouth open. Examination of the eyes reveals on the right side a microphthalmic eye with a coloboma of the iris and choroid. On the left side there was an apparent absence of the eye. There were two small lids and a socket. No eye could be felt by introducing the finger in between the lids and feeling about in the orbit. The lower part of the socket was deformed. The union between the malar and the superior maxillary bone had never taken place. There was a space one-fourth of an inch wide between the two bones. The patient was given an anesthetic and a dissection of the contents of the orbit was made. The fissure between the malar and the superior maxillary bone was found to extend back to the spheno-maxillary fissure. In the apex of the orbit, lying closely against the optic foramen, was found a rudimentary eye. It was removed. It was about one-third of an inch in diameter. With the naked eye no change indicating the cornea could be detected. The eye was hardened in formaldehyd and alcohol and stained with hematoxylin and eosin. The eye was composed of an outer thick fibrous coat. The cornea could only be differentiated microscopically from the sclera by the absence of an inner lining of pigmented cells. The eye was filled with a myxomatous tissue much more solid than the normal vitreous. It contained some blood vessels, one of which was very large. No trace of retinal elements could be found. The internal structures seemed to have all undergone a myxomatous and mucoid degeneration. The lens and retina seemed to be absent.

Case 5.—This is not a single case, but the report of a family with six children. The father and the mother were both dark complexioned. There was no history of any degenerate condition in the family. They were first cousins. They had but six children. Of these, two were dark complexioned and had good vision. The other four were albinos and had a vision of 6/12 or less.

Case 6.—Female, age 5. Parents were first cousins. No history of any serious eye trouble or of degenerate conditions in family. Child was very dull. Left eye began to enlarge shortly after birth. O. D. apparently normal. O. S. very much enlarged. Tension normal. Diagnosis, congenital glaucoma left. The left eye was enucleated. The usual cupping of the disc was present. Microscopic examination failed to reveal any obstruction of the canal of Schlemm.

Case 7.—Female, age 6 months. This case I saw in consultation with Dr. Cooling of Wilton Junction, Iowa. Parents were healthy. No history of any tumor or eye trouble in the family could be elicited. Parents were first cousins. The parents said that two months before the right eye began to increase in size and a few weeks later the left began. The child apparently could not see. Pupils were dilated; would not react to light. Tension in right eye +2, and in the left +1. Both eyes were enlarged, the right the more. Lying behind the iris in each eye could be seen a large tumor. Diagnosis, double-sided neuroepithelioma. Four months after the child was seen it died.

Case 8.—Male, age 4. Parents' and grandparents' history negative. Parents cousins. Boy has congenital coloboma of iris in each eye and anterior polar cataract in the right eye.

Case 9.—This is a family reported by Dr. Vail. Parents cousins. Consanguinity was positively denied for a year. Parents' and grandparents' history negative. As the result of the union seven children were born. Five had congenital cataract. The cases were so helpless that Dr. Vail recommended that no more children be born.

Case 10.—Dr. Alt reports a family in which there is constant intermarriage. Senile cataract is hereditary in the family. In the last generation several cases of congenital cataract have made their appearance. If there is any relation between the senile cataracts and the congenital the former must be hereditary cataracts not the result of a sclerosis of the nucleus of the lens, but rather a nutritive disturbance. One could not think of the former condition appearing in children.

Case 11.—Female, age 12. Parents' history negative except that they were first cousins. Is an only child. Has simple atrophy of the optic nerve.

Of 181 blind children in the Iowa College for the Blind in 1900, 9, or about 5 per cent., were the result of consanguineous marriage of the first degree. The number of consanguineous marriages of the first degree in Iowa is far below 0.5 per cent. I ought to say that it is exceedingly difficult to secure a history of consanguineous marriage when present. There were probably others present in the college the result of consanguineous union.

If we exclude from the list those blind children who were blind because of blennorrhea neonatorum, sympathetic ophthalmia, trachoma, etc., and consider only those who suffered because of congenital conditions, we would find that 14 per cent. were the result of consanguineous marriage of the first degree. These figures seem large. I do not think they ought to be considered as indicating the relative proportion of degenerate eyes in families the result of consanguineous marriage and in those not, because we are considering here only one field. Among the pupils who have entered the college since 1900 the per cent. is about the same.

Two factors may enter into the production of many of these conditions: 1. The eye is really an outgrowth from the brain, and is consequently subjected to the same conditions as the central nervous system during its development. 2. The eye is changing, and an organ that is adapting itself to new conditions is more liable to malformation than one with a constant condition. The socket is becoming less deep and the superciliary ridges less marked. Fuchs believes that in families with school myopia the eyes have adapted themselves to their work.

A number of interesting things are suggested by these cases: 1. The relation of the inheritability of a condition to its production by consanguineous marriages. I would judge from these cases that the greater the inheritability of a condition the more liable is it to be the result of consanguineous marriages. Theoretically, this would also be the case. Retinitis pigmentosa is a disease of great inheritability. I have now under observation a grandfather, a mother and a son each with retinitis pigmentosa. As it is a comparatively rare condition there is not the chance for doubting the tendency of its appearing by marriage of individuals not related as the more common conditions.

The influence of consanguinity on retinitis pigmentosa has been mentioned by several. Dr Liebreich says that of 26 cases of retinitis pigmentosa, 53.8 per cent. were the result of consanguineous marriage. Magnus reports 33 per cent. of cases of retinitis pigmentosa in children, the result of consanguinity. Of 66 cases reported by Chapault, 45 per cent. were the result of consanguineous marriage. Of 18 cases under my observation where the history of the parents could be secured, 8, or 44 per cent., were the result of consanguinity. Schobel[1] says it is generally dependent on consanguinity. A very careful examination into the history of the ancestors of the cases I mentioned failed to reveal any eye trouble of importance. Yet in the first group mentioned we have these cases appearing by intermarriage in the two groups when consanguinity took place. Albinoism has a strong inheritability. Congenital cataracts have also strong inheritability. Most of the cases mentioned were not true cataracts, but capsular opacities, the result of non-absorption of fetal structures. In approximately one-third of the cases, however, the capsule was not opaque, but the lamellæ were affected.

Some light may be shown on the cases reported by Dr. Alt, where congenital cataracts appeared in the offspring of relations suffering from senile cataract by the fact that hereditary cataracts some time appear earlier in each succeeding generation. I know of a case where the grandfather developed cataracts at about 50; the mother had one at 35, and the son had congenital cataracts.

2. It is interesting to note that where there is an arrest in development, as in the cases of microphthalmos, coloboma of the iris, congenital cataract, and anophthalmos, the eyes are in an opposite state to those of eyeless fishes and worms where they have been lost by disuse. Wagenmann[2] has found that the lens and the retina were almost the least of the structures acted on, and that the phyletic degeneration does not follow the reverse order of development. The eye does not resemble part embryonic conditions as in the eyes where there is an arrest of development. At birth the eye is almost normal, but with age it degenerates. The microphthalmic eye improves the first ten years after birth, owing to a diminution of the hyperopia. A third point in connection with these cases is the resistance after operative procedures. Dr. Gruber of London writes me that he has operated on a number of such eyes with good results. I have never seen any serious sequelæ following an operation. While there is an arrest of development, the nutrition is apparently normal.

As to the influence of consanguinity on the neuro-epithelioma, I would certainly not express any opinion. I simply mention the case as I found it while conducting my investigations.

DISCUSSION.

Dr. J. W. Foss, Phoenix, Ariz.—This subject of inbreeding is given a great deal of attention by stockmen, but is neglected by human beings. About two months ago I visited an ostrich farm near Phoenix, and they had just hatched out eight or ten chicks, and out of the lot, because of physical deformities, there was only one it was possible to save. This was the result of interbreeding It costs so much to get a male ostrich from Africa that to save expense they interbreed and get few perfect offspring as a result. This paper gives us the key to our duty as physicians, and we can prevent many of these consanguineous marriages by firmly and persistently impressing on our patients and friends the unfortunate results of such union.

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[1] System of Diseases of the Eye. Norris and Oliver, vol. iii, p 460.

[2] Archiv für Entwickelungs Mechanik der Organismen, 8, 4

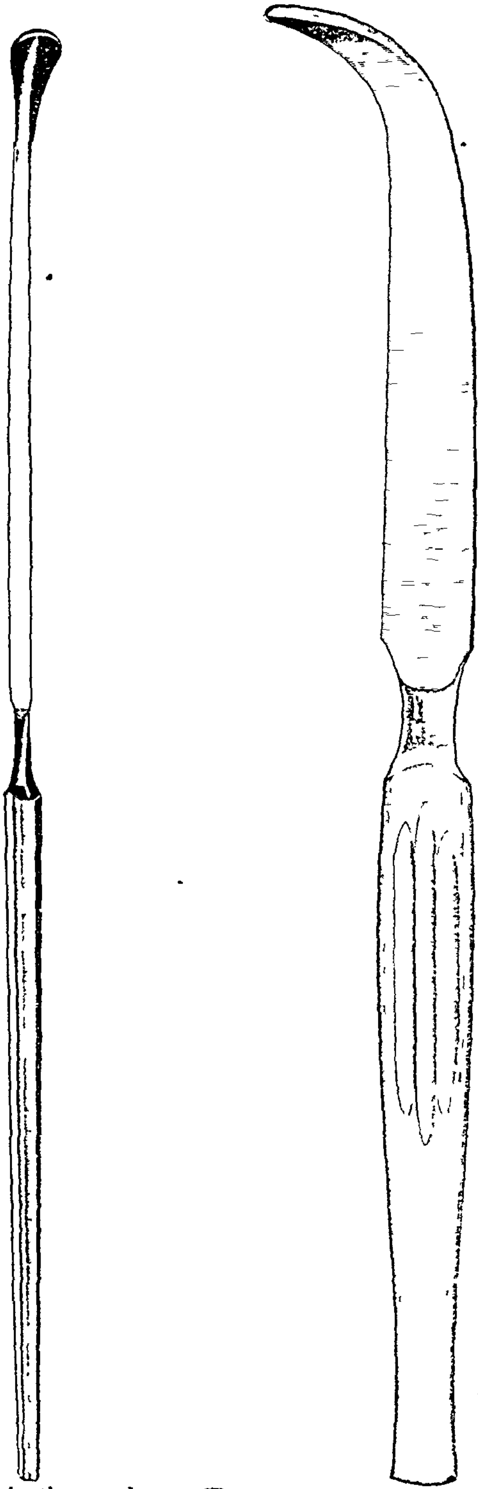
Sylvius the Medical Grammarian.—J. D. Sylvius, M.D., born in 1478, whose name is so associated with the anatomy of the brain, was a famous grammarian in his day and wrote a popular Latin grammar. The *Gaz. Méd. de Paris* states that he was the first to propose and use two distinct letters for i and j, and for u and v. He was also the originator of the French accents, distinguishing between the three sounds of e: e, è and é. Several members of the Estienne family, the celebrated printing firm, were physicians likewise.

New Instrument.

A PERITONEUM KNIFE.

JOHN R. COOK, M.D.
FAIRMONT, W. VA.

The accompanying illustrations show a new instrument, a peritoneal knife, which I have found a very convenient device for quickly enlarging the peritoneal opening after making the opening in the usual way. The beak of the knife slides just under the peritoneum, hugging the same closely, and in this way all danger of wounding the intestines is eliminated.



I also find it very convenient in enlarging the abdominal ring in operations for the reduction of hernia. As will be seen, the blade is long and will divide all tissues, if necessary, from within outward.

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SATURDAY, SEPTEMBER 12, 1903.

THE FUNCTION OF THE CORPUS LUTEUM.

Everything about the structure of the corpus luteum suggests that it is of glandular nature. If one is examined at about the time of the implantation of the ovum it is seen to consist of rows of succulent cells radiating out from the center, resembling closely the structure of a liver lobule, not the cortex of the adrenal; that is, it resembles a true secreting gland. If it has an internal secretion such as the other organs it would naturally seem that this secretion must play some part in either menstruation or pregnancy, or more likely both, for it appears and disappears with menstruation, and reaches its highest development during the first months of pregnancy. This last indicates most probably a relation to the first phenomena of pregnancy, such as the implantation and the development of the ovum. This phenomenon of the preparation of the uterus for the reception, implantation and development of the ovum has always been mysterious, but it has also been evident that it could not be brought about by the fertilized ovum itself, for the changes are most rapid at the time when the ovum has neither vascular or nervous connection with the uterus and when it is still far too small to be of effect as a foreign body. On the other hand, these preparatory changes in the uterus occur when the corpus luteum is proliferating most rapidly, and in the later months of pregnancy when the corpus luteum is beginning to retrogress uterine growth is much less, and seemingly secondary to the rapid enlargement of the ovum. Furthermore, all animals that have a uterine insertion of the egg have a well-developed corpus luteum; those that discharge the undeveloped egg have either a rudimentary corpus luteum or none at all. These suggestive facts seem to have first been put together by the late Gustav Born, who developed from them the hypothesis that the corpus luteum of pregnancy must be a gland with internal secretion, the function of which was connected with the implantation and development of the fertilized ovum.

During his last sickness he requested L. Fraenkel to undertake the work necessary to the proof of this hypothesis and Fraenkel's[1] recent publication of his study is most interesting, and seems to constitute a distinct addition to our knowledge of the puzzling phenomena of menstruation and ovum implantation. Not only was Born's idea found to be correct, but it was found to be but part of a general law, namely: The corpus luteum during the years of generative activity produces through its internal secretion increased size and turgor of the uterus, as well as the periodic monthly hyperemia. This secretion accomplishes favorable conditions for insertion and growth of the ovum, or, impregnation failing to occur, it produces menstruation. If corpora lutea are lacking atrophy of the uterus occurs, and menstruation is absent. The condition of the uterus before puberty as well as after the climacteric depends on the absence of corpora lutea. In determining these facts rabbits were used, since in them the time of occurrence of the various series of events in the early stages of pregnancy have been pretty well worked out. It has been long known that removal of the ovary during the early part of pregnancy prevented maturation of the ovum, but Fraenkel found that a similar result was constantly obtained by simply burning out the corpora lutea, leaving the rest of the ovary intact; if a small part of the yellow bodies was left pregnancy was not always checked. In rabbits this influence seems to last through about twenty days of pregnancy, which is comparatively longer than is the case in women, since operative removal of ovaries as early as the third month has not always checked pregnancy. The effects produced by the corpus luteum seems to be chiefly through its influence on nutrition. As much atrophy of the uterus was found to follow simple destruction of the corpora lutea as after complete removal of the ovaries. A number of cases were found in the literature that seemed to Fraenkel to indicate that abortion in women with ovarian tumors has resulted from involvement or injury of the corpus luteum. There are also several instances of hydatid mole occurring in women with bilateral ovarian tumors, probably too many to be dismissed as merely coincident.

The relation of these bodies to menstruation was shown by burning the corpus luteum of menstruation found in the ovaries of women having regular periods, who were being operated on for malpositions or similar troubles that did not interfere with the observations. This addition to the operation is harmless, since such corpora naturally undergo resolution. The result in eight out of nine cases was that the next menstruation that was due was skipped, the succeeding menstruation occurring regularly as before. This seems to warrant the inference that the corpus luteum of one menstruation causes the next menstruation, in some way as yet not known.

When summed up it will be found that these studies simply enabled us to localize certain influences that the ovary has long been known to possess in the corpora lutea. The next step in order is the isolation of the active substance that the lutein cells secrete into the blood, as has been done with the thyroid and adrenal, and then we shall wish to learn how it acts, whether by vasomotor changes, or by directly affecting metabolism in the uterine tissue.

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[1] Archiv f. Gynaekol., 1903, lxviii, 438.

A certain practical result has already been found. Fraenkel was able in nearly all cases of operatively produced premature climacteric to greatly modify the symptoms by administration of lutein tissue from the cow, while at the same time further establishing his experimental results. Such lutein tissue is not difficult to obtain, since a large part of the bovine ovary consists of corpus luteum, and the results that he publishes warrant further trial of the substance as indicated by various conditions, particularly since it has been found to be harmless in any case.

MODERN LONGEVITY.

At the late actuarial congress in New York City, the subject of improved longevity was discussed and certain views expressed that have caused some sensational newspaper comments. It was declared by one speaker, according to the press reports, that the increase of average longevity was associated with a general degradation of the race. The increase of vitality was not in the strong, the results of sanitary reforms and of medical advances in the management of disease were only a diminution of mortality of the weakly and consequently a reduction of the general average of vigor and physical well-being in the mass. In other words, it is an interference with the process of natural selection by which the races of animals, man included, advance from the lower to the higher grades of physical perfection and being. This is not a newly discovered truth; it has long since been pointed out that mankind, especially in its social and recent development, does not come under the usual rules of natural selection—but naturally such an utterance captures the attention and is magnified by the press reporter.

There is more than one aspect in which this matter can be viewed. Undoubtedly we perpetuate the existence of many who are not the best samples of our race in the increased average longevity and the racial physique may apparently suffer. The survival of the helpless, the insane and all the defectives who would succumb under less artificial conditions also add to our "burdens," but it seems to us an error to say that the general result is race degeneration. The evolution of the human species has been intellectual rather than physical and at his present stage of development man is, as an animal, a degenerate. Physically, he is a weakling compared to his fellow animal in the jungle and pasture, but his better organized brain makes him incomparably their superior and their master. On an economic basis alone, the Spartan system of destroying the weaklings in infancy or the less ancient method of accomplishing the same result by neglect and ignorance is a fallacy. Every infant that dies at birth or in its period of helplessness is an instance of wasted human labor, and every one that is carried over to its age of helpfulness and productiveness is a possibility for the advancement of the race. Why this possibility is not always realized is a sociologic, not a medical or actuarial problem.

It is quite possible if not, indeed, probable, as has been pointed out by a recent writer,[1] that, while the average longevity is increased under better sanitation and with the advances in medicine in civilized communities, the number of instances of extreme longevity is diminished, and that we will find most instances of extreme old age in the lower, but not the lowest grades of civilization. Absence of stress and worry are the chief favoring factors of extreme longevity, and these are not so commonly associated with the complex conditions of modern civilization as with former patriarchal or feudal conditions. There is, moreover, a very material reason for the apparent diminished number of centenarians in highly civilized countries, the evidence is better sifted, and, as we have before pointed out,[2] the errors of ignorant persons as to their own excessive age are more frequently excluded. Those countries that have the most reliable vital statistics report the fewest cases that have passed the century mark. The fact that we do have so many instances of extreme age under modern conditions, together with an increase of average longevity, is good evidence of what the advance of medical science has done for the race. The further fact that the weaklings are preserved does not overbalance the general gain, and the prophecy of race degeneration from this cause may be safely disregarded.

THE SIMILARITY OF SERUM COMPLEMENT AND THE DIGESTIVE ENZYMES.

While the action of complement has long been likened to that of a ferment, that it is such, or is the same as the ordinary enzymes with which we are familiar, has never been established. It is strikingly like the proteid dissolving enzymes, especially trypsin, in the following particulars: It dissolves proteid substances, such as the bodies of red cells, of bacteria, or for that matter any other sort of cells to which it may be attached by a suitable amboceptor; it is not entirely specific for different substances; it acts best in a medium with a certain degree of alkalinity; it is destroyed by a degree of heat quite comparable to that destroying enzymes. On the other hand, it has not yet been demonstrated that cell solution by serum leads to the production of the various digestion products of proteolysis by which trypsin or other proteases are characterized. The known relation of complement to the leucocytes has suggested that it might be the same as the protease with which the leucocytes accomplish their remarkable feats of solution of digestible foreign and dead substances. The fundamental importance of complement in resistance to bacteria through bacteriolysis makes any light on its nature of particular value, and, therefore, the demonstration by Delezenne[3] of the similarity of action of the pancreatic and intestinal juices with that of the amboceptor and complement in producing cytolysis is of interest.

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1. J. M. French, Med. Exam. and Prac., August, 1903.
2. THE JOURNAL, xl, p. 995.
3. Comptes Rendu Soc. Biol., 1903, No. v. 171.

We have recently spoken of the discoveries in the field of pancreatic digestion, showing that the enterokinase of the intestinal juice is essential to tryptic action, because it makes active the otherwise inactive trypsinogen which the pancreas secretes into the intestine. This action of enterokinase on trypsinogen Delezenne shows to be quite similar to that of amboceptor on complement, and he does it in the way that has yielded most of our information concerning complement, through a study of hemolysis by pancreatic juice. If red corpuscles that have been thoroughly washed with salt solution are placed in inactive pancreatic juice, that is, fresh pancreatic juice obtained pure through a fistula without coming in contact with the intestinal secretion, they are not at all affected for several hours. Pure intestinal juice, with its contained enterokinase, agglutinates them, but causes no hemolysis whatever. On the other hand, mixtures of the two, in which there is an active trypsin, dissolve the corpuscles very quickly. That this action is similar to that of amboceptor and complement the following experiments show: Red corpuscles are placed in each of the two tubes, one containing only intestinal juice, the other only inactive pancreatic juice, and they are allowed to stand in the cold for two hours. Then the corpuscles are repeatedly washed in salt solution, which frees them from any enterokinase or trypsinogen with which they are not united by other than physical means. If, now, the corpuscles that have been treated with enterokinase have inactive pancreatic juice added to them they are promptly dissolved, showing that the enterokinase had been combined with the corpuscles in a manner preventing it from being washed away, and from this site had made the trypsinogen active. On the other hand, when enterokinase was added to the corpuscles that had been treated with trypsinogen no dissolution of the corpuscles occurred, showing that the trypsinogen had been washed out completely, not having been united as had the enterokinase. In other words, enterokinase acts like amboceptor, uniting the corpuscles to the trypsinogen, which behaves like complement.

Whether the usual method of action of pancreatic juice in dissolving proteids is similar to this or not could not be finally determined, for albuminous bodies, particularly fibrin, have a way of entangling enzymes which makes it impossible to wash all the enzyme out, so that the above described experiments on red corpuscles could not well be repeated on foodstuffs. However, as far as experiments could be performed they indicated that this is the mechanism of pancreatic digestion. Ehrlich's conception of intracellular food receptors is thus shown to be very possible, indeed. As to the question of the proteolytic nature of complement as it exists in the blood, Delezenne's experiments seem to give rather a negative answer, at least so far as any identity with trypsin is concerned. In hemolysis by enterokinase and pancreatic juice the hemoglobin is not only liberated from the stroma of the red cells, but also decomposed and hematin is formed, whereas in hemolysis by serum the action seems to be limited to the liberation of the hemoglobin.

MEDICAL DEFICIENCY IN THE SOUTH AFRICAN WAR.

The report of the Royal Commission on the South African war takes up at some length the question of the medical management. While this subject has been treated by the special commission in 1900, they nevertheless again discuss it and find occasion for criticism of some defects similar to those which were developed in our brief Spanish war, such as insufficient personnel, defective sanitary organization, imperfect transportation facilities, etc., and some that we did not hear of, such as antiquated and cumbersome supplies, medicines twenty years old and instruments that should only be found in museums at the present time. We had more excuse for our deficiencies; we had a little army of 25,000, fairly well equipped, but this equipment and personnel could not be extended impromptu over a volunteer army of 250,000. In England they have a standing force of between 200,000 and 300,000 men, much of it in active service in some parts of the world all the time, and there would seem to be less reason why the defects above mentioned should exist in their case than in ours. The point is made that in a country with such facilities for supplying everything at need, it is useless to try to keep up large stores until they become antiquated and comparatively non-effective. Further, with colonial extension requiring more or less constant active service, it is reasonable to ask why the government should not be more ready for such emergencies as the Boer war. It is true the demands were extreme, and considerable excuse can be given, but the fact that the equipment of the colonial contingents and of the Boers themselves was generally so much better in many respects makes it appear that there had been too much red tape and official neglect somewhere. We do not mention the report as anything satisfactory to us because misery loves company, but simply because it is our business to learn as many valuable lessons as possible from other's experience as well as from our own.

THE LUST OF SLANDER.

Under the above heading, the *British Medical Journal* comments, July 25, on an appeal made the week previous by a deputation from the British Union for the Abolition of Vivisection before the Home Secretary of Great Britain. The deputation not only asked for a more rigid enforcement of the laws regulating vivisection, but for the enactment of more stringent ones. The deputation made use of the old arguments, and, of course, brought in the threadbare one to the effect that Sir Frederick Treves had stated that his experiments on animals had not been of service, for when he went to South Africa and operated on the soldiers the results obtained were quite different. As it happened, the Home Secretary knew something about the matter, for he stated that Sir Frederick Treves had repudiated the statement. He also informed them that the laws were being enforced and that he, for one, would not advise more rigid laws. Among those who appeared for the antivivisectionists was a reverend gentleman who stated that watching these operations, i. e., vivisection, "induced a callousness that in time, in some cases, developed into a feeling of positive pleasure," and so on. The *British Medical Journal* analyzes the arguments presented and shows the basis for much of the "rot" that is being used as arguments by these zoöphiles. Among other arguments referred to is one credited to a "Dr. Leffingwell, an American antivivisectionist," a name that sounds very familiar in connection with antivivisection literature of this country. It occurs in an article which appeared in the *Abolitionist*, the official organ of the British Union for the Abolition of Vivisection, for 1901, entitled "A Terrible Revelation: Vivisection and Sexual Psychopathy," the terrible revelation being that "vivisectors make use of the sight of dying animals or torture animals to stimulate their lust." This statement, it is reported, is made on the authority of the above-mentioned American and by some unnamed person whom he cites as saying: *"En France on prolonge les vivisections pour se procurer d'infames plaisirs." American Medicine*, in commenting on this Leffingwell accusation, August 22, says:

> It suggests a depth of degradation to which not even an antivivisectionist, and least of all an American, could fall. And now in the name of decency we call up Leffingwell—until he cleans himself not even Mr., surely not Dr.—to do one of two things: categorically and absolutely to deny that he ever made such a charge, or prove, up to the hilt, that it is true. Silence, or any characteristic antivivisectionist prevarication and indefiniteness, will leave him branded as poltroon and liar.

Thus far we have seen nothing from the Leffingwell referred to and we are waiting patiently. It is barely possible that he does not read medical journals, or possibly only such parts as may be twisted around to suit him in some of his "arguments." The old saying that "silence gives consent" we shall take to be true in this case, and certainly Leffingwell will be proud of the honor attached to him in having made such a dastardly accusation.

Medical News.

DISTRICT OF COLUMBIA.

Twelve Passed Examination.—Out of 22 physicians recently examined for appointment as medical inspectors of public schools, six passed; and of 11 examined for appointment as physicians to the poor six also passed.

Washington Suicides.—During the fiscal year just ended 54 deaths occurred by suicide, 22, or nearly 70 per cent., more than for the previous year. The revolver was used in 15 cases, carbolic acid in 11, and strangulation in 9.

Nonagenarian Illicit Practitioner.—Brooks Johnson, a colored individual claiming to be 98 years old, was recently arrested on the charge of practicing medicine without a license. The complaints allege that he offered to remove "spells" for $25.

Application Denied.—Dr. William C. Woodward, secretary of the Board of Medical Supervisors of the District of Columbia, has informed the commissioners that the board refuses to grant Salina Armstrong Hopkins, M.D., a license to practice medicine in the District, as the papers filed by her are not sufficient to warrant the issuance of a license without fee or examination.

Weaning of Children Fatal.—Dr. William C. Woodward, health officer, in commenting on the alarming death rate among infants from diarrheal diseases, says:

> Weaning of children during the heated season is seldom recommended as a matter of choice, but only as a matter of necessity. In most instances the deceased infants were said to have been well developed and healthy and to have thriven so long as they were fed on mother's milk. The fatal change began with the substitution of other foods. The cause most commonly alleged for such substitution was the necessity under which the mother found herself of earning her own livelihood. Condensed milk seems to have been selected in most cases because of its convenience and not because of any intelligent belief in its superior merit. No effort was made to skimp on the price of this article. In only one case was a cheap brand used, and that was by no means the cheapest.
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> Those having the care of the babies seem generally to have been ignorant of the necessity for a proper water supply for such children. Little water was given as a rule, and even that small amount was Potomac water, unboiled. Nipples on bottles were but fairly well cared for. The sanitary condition of many of the premises in which these children lived was bad.

ILLINOIS.

Library Donated.—Charles C. Truesdale has donated the medical library of his father, the late Dr. Calvin Truesdale, to the Rock Island public library.

Anthrax Reappears.—Anthrax has broken out in the herd of cattle at Staple Farm, north of Palatine. Two years ago an outbreak of the same disease occurred in this section.

Personal.—Dr. Buenaventura H. Portuondo, Belleville, has been appointed commissioner of Cuba to the World's Fair, and also consul of Cuba at St. Louis.——Dr. Oscar Yarnell, Cerro Gordo, has gone to Europe.

Chicago.

Pasteur Institute Incorporated.—The Chicago Pasteur Institute has been incorporated by A. P. Lagorio, Carlotta Lagorio and B. G. Bruno, with a capital stock of $2,000, to treat hydrophobia.

Arrests.—Dr. L. Slominski and F. Eisen-Bockius have been arrested, charged with criminal malpractice.——Dr. Alfred Dahlberg has been arrested, charged with selling "cocain and other narcotics without a physician's prescription."

New Location for Temperance Hospital.—The directors of the Frances E. Willard National Temperance Hospital have decided to erect a $75,000 building on Lincoln street, between Polk and Harrison streets. The lot has been paid for, and there is $25,000 for a building fund on hand.

The American Association of Obstetricians and Gynecologists meets in Chicago, September 22 to 24. The local members of the association are making arrangements to entertain those who attend with lunches, banquets, etc. The meetings will be held in the law library of the Northwestern University Building, corner of Dearborn and Lake streets.

MARYLAND.

Baltimore.

August Deaths.—During August there were 860 deaths, 39.77 per cent. being of persons under 5. Of the causes of death the following were most prominent: Diarrhea and enteritis, 136; tuberculosis, 101; heart disease, 55; Bright's disease, 48; cancer, 37; pneumonia, 30; typhoid fever, 26; apoplexy, 24; scarlet fever, 11; whooping cough, 10; dysentery, 9, and diphtheria, 7.

Johns Hopkins Faculty Changes.—The following changes have been announced in the Johns Hopkins Medical School: Dr. Norman McLeod Harris has accepted a position in the bacteriologic department in the University of Chicago. Dr. Glanville G. Rusk, assistant in psychiatry, has accepted a position with the Pathologic Institute of New York. Dr. Burton D. Myers, assistant in anatomy, has an appointment as instructor in anatomy in the Indiana State University.

Personal.—Dr. Thomas Cullen has gone to his camp in Canada to spend a month. He has as his guest Dr. Howard A. Kelly, who returned from Europe August 29.——Dr. L. Ernest Neale has returned from Europe.——Dr. John Ruhräh has returned from a trip to England, Ireland and Scotland.——Dr. Joseph E. Teard is at Governor's Run on Chesapeake Bay.——Dr. William B. McDonald is at Capon Springs, Va.——Dr. Albert Shelley has gone to England.——Dr. J. Staige Davis is at Eaglesmere, Pa.

Johns Hopkins Ex-Internes.—Movements of former members of the staff are announced as follows: Dr. J. Auer has gone to Chicago to practice; Dr. J. B. Briggs has been made a member of the permanent staff of the hospital; Dr. Camillus Bush has been appointed assistant resident surgeon; Dr. J. W. Churchman is to be associated in practice with Dr. Hugh Young, Baltimore; Dr. H. W. Cook has been appointed resident physician at the Memorial Hospital, Richmond, Va.; Dr. M. L.

Haviland will practice in New Jersey; Dr. C H. Horst is to remain temporarily at the hospital. Dr. E. W. Meisenhelder has received an appointment in the Varnes Hospital, Washington, D. C.; Dr. C. B. Wright will remain temporarily at the hospital; Dr. F. W. Lynch, resident obstetrician, is going to the University of Chicago, and Dr. H. T. Marshall, assistant resident pathologist, is going to Montana on a mission for the United States Bureau of Animal Industry.

MASSACHUSETTS.

Personal.—Dr. George L. Richards, Fall River, is recovering from typhoid fever.

Smallpox Difficulties.—The board of health of Fall River is having much difficulty in stamping out smallpox. Recently a house was forced open by the police with axes and two men ill with the disease were found hidden, and removed to the hospital.

Mortality of Boston.—The mortality in Boston still continues low for this season of the year. The total number of deaths for the four weeks ended September 5 was 798, 42 less than during the same period last year and an annual rate of 17.23 per 1.000. Deaths under one year numbered 248; under 5 years, 302. There were reported 17 deaths from diphtheria, 2 from scarlet fever, 15 from typhoid fever, 78 from tuberculosis, 3 from pertussis, 63 from heart disease and 25 from marasmus.

Tuberculosis Aid and Education Association.—A new association whose objects are "to cure at home if possible persons suffering with tuberculosis; to relieve with food, so far as possible, all needy tuberculous persons; to educate the entire community in the care and prevention of this disease; to promote the establishment of hospitals for hopeless cases," hopes soon to commence active work in Cambridge. Mrs. Rufus P. Williams is chairman of the committee; Dr. John L. Hildreth, Cambridge, is chairman of the advisory board, and Dr. Edward O. Otis, Boston, advisory expert.

The New Harvard Medical School.—The plans for the first group of buildings of the New Harvard Medical School recently filed call for five buildings, fireproof, with white marble walls. The administration building, 166 by 124 feet, and 5 stories high, will cost $535,000; the physiologic laboratories, 196 by 148½ feet, 3 stories, $421,000; the laboratories for bacteriology and pathology, 185 by 128 feet, 3 stories, $390,000; histology and anatomy get a three-story building, 196 by 148 feet, and costing $396,000, while pharmacology and hygiene will be studied in a three-story building 185 by 108 feet, to cost $346,000. All are to be erected beyond the fens on Longwood avenue, on the lot which extends through to Francis street and Huntington avenue.

Out-Patient Department Opens.—September 1 the new outpatient building of the Massachusetts General Hospital was opened. It is a large three-story building, on the western side of the hospital grounds, with entrance on N. Grove street. It forms part of the new group of buildings already planned, and partly built, which will entirely inclose the open grass plot, on one side of which stands the old hospital designed by Bullfinch. This new building is complete in all its equipment, special efforts being made for asepsis, extension apparatus for specialists and the best means for clinical instruction. A unique feature is the card catalogue system of keeping case records, which are all kept at the central office and sent to the treatment room by dumb-waiter and messengers. Daily notes are made by the physician and the record thus returned to the central office and filed. An abundance of cross references will make this centralized record bureau of great value to anyone looking up special diseases.

MICHIGAN.

Smallpox.—The State Board of Health reports smallpox present at 37 places in the state.

Donation to Hospital.—From the receipts of the firemen's tournament recently held at Calumet $1,000 has been given to the building fund of the new St. Joseph's Hospital.

Michigan Standard Too Low.—The president of the Canadian Medical Association, in an address, declared that although Michigan was constantly raising her medical standard it was still too low even to be considered by the Ontario Medical Council.

Sent to Jail.—Dr. Richard L. Cornwell, Montague, has been sentenced to thirty days' imprisonment on a charge of nonsupport.——Paul Newton, claiming to be a "professor in Bellevue Hospital, Chicago," was arrested at Benton Harbor, September 2, charged with obtaining $200 by fraud from a farmer at Sodus on an alleged contract to cure the farmer's wife of asthma. Being unable to furnish bail, he was sent to jail.

Personal.—Dr. Edward P. Wilbur, Kalamazoo, has been elected a member of the board of censors of the Kalamazoo Academy of Medicine, vice Dr. John H. McKibbin, removed from the city.——Dr. William A. Stone, Kalamazoo, has been elected to fill a vacancy in the board of censors of the Kalamazoo County Medical Society.——Dr. William J. O'Reilly has been elected president and Dr. Michael D. Ryan secretary of the medical staff of St. Mary's Hospital, Saginaw.

NEBRASKA.

Scarlet Fever Closes School.—The German school, 12 miles northwest of Beatrice, in Hanover Township, has been closed on account of the prevalence of a severe type of scarlet fever.

Personal.—Dr. Elias Holovtchiner, Omaha, has returned after a trip of three months in Europe.——Dr. Irwin C. Sutton, Shubert, will take two years of post-graduate work in Philadelphia and Europe.

Downs in the Toils.—Dr. Charles W. Downs, Omaha, was recently haled before the State Board of Health with having violated a statute by distributing pamphlets or other advertising matter detrimental to public morals. Dr. Downs pleaded ignorance of the law, and his case was allowed to go over until the September meeting.

Physicians Object to Law.—Omaha physicians are said to object to the provision of House Bill 63, requiring reports of contagious diseases to be made to the State Board of Health. The act makes it obligatory on attending physicians to file such reports with the board, at their own expense. The act imposes a penalty for each violation of its provisions. In addition the state board has adopted a rule requiring all these reports to be filed within twenty-four hours and all cases of smallpox, scarlet fever, diphtheria and meningitis to be quarantined not less than fourteen days and until such time as the case shall cease to be infectious. After the patient is released a release card must be filled out and sent to the board.

NEW YORK.

Milk Testing.—The monthly report of the state health department devotes much space to methods of testing milk intended for the use of infants.

Consumption Decreased.—It is reported that deaths from consumption in New York have decreased 40 per cent. since the health department began its crusade against the disease in 1891.

Lawton Hospital Opened.—Lawton Hospital, Herkimer, erected by Levi Lawton at a cost of $5,000, and equipped by other residents of the village at an expense of $3,000, was dedicated August 29.

Syracuse University Changes.—Drs. Tennyson L. Deavor, H. B. Doust and G. S. Doust have been made instructors in and demonstrators of anatomy; Dr. George A. Hanford is the new lecturer on chemistry and physiologic chemistry, and Dr. W. Dewey Alsever has been appointed instructor in physical diagnosis.

Deaths in Cities.—Vital statistics show the death rate in July to have been lowest in Ogdensburg, 9.4 per 1,000 and highest in Jamestown, 27 per 1,000. Of the larger cities Albany was highest (20.7), Rochester was lowest (15.7), with Syracuse (15.8), Buffalo (16.6), and New York (19.6). There were no cases of smallpox, though the average for five years has been 25.

Buffalo.

Personal.—Dr. Ernest Wende is on a fishing trip in Northern Canada.——Dr. Albert T. Lytle is taking a trip up the lakes.——Dr. James W. Putnam has returned from Prout's Neck, Me.——Dr. Edward L. Frost has returned from Muskoka.——Dr. Eugene A. Smith has resumed practice after an extended stay in the Adirondacks.

Adulterator Fined.—William Hipkiss, a milk dealer, pleaded guilty and was fined $50 and costs in the Municipal Court for putting formaldehyd in cream as a preservative. Mr. Hipkiss made an affidavit that the material used was bought under the name of "Special in Preservative" from the Preservative Manufacturing Company of New York. The State Department of Agriculture will investigate the matter mentioned in Hipkiss' affidavit.

New York City.

A Narrow Escape.—Dr. George G. Rambaud, director of the Pasteur Institute, and his wife had a very narrow escape from severe injury in a collision between their automobile and an electric car.

Free Antitoxin.—The health commissioner has asked for $70,000 for diphtheria antitoxin, and recommends that hereafter the sale of antitoxin by the department be stopped and that the preparation be furnished without expense to residents of the city.

Personal.—Dr. Edward H. Giles, while driving near Goshen, Mass., sustained a fracture of the arm and two ribs and a sprain of the hip in a runaway accident.——Dr. Frederick L. Flynn, house surgeon of St. Catherine's Hospital, Brooklyn, has resigned and has been succeeded by Dr. Lewis Schaefer.

PENNSYLVANIA.

Typhoid at Carbondale.—Up to noon, August 25, 47 cases of typhoid fever had been reported to the Carbondale Board of Health.

Staff Appointed.—Drs. Samuel C. Stewart, Francis G. Bennett and Bert E. Leipold have been appointed to the medical staff of the Clearfield Hospital.

Ambulance Struck by Locomotive.—While conveying a patient to the McKeesport Hospital, an ambulance was struck by a switch engine at Riverton and demolished; the ambulance surgeon was badly bruised, the driver thrown into the air and cut and bruised, but the patient escaped injury.

Pure Food Crusade.—August was a record-making month for the State Dairy and Food Department. About $6,500 was collected in fines for adulterations, and about 200 prosecutions were begun. About 100 dairymen of western Pennsylvania have recently been prosecuted and fined for putting formaldehyd in milk, the fines aggregating over $5,000. The president of a prominent brewing firm of Philadelphia is held in $500 bail on the charge of adulterating beer with salicylic acid. Several grocery firms when arraigned acknowledged selling adulterated goods, brandy, vinegar, lemon extract, etc.—though in some cases it was done ignorantly—and paid fines of $50 each and costs of court. The activity of the dairy and food commissioner is generally highly commended. Although the prosecution of firms selling impure articles in ignorance—sometimes under guarantee of their purity—seems a hardship, yet in the end it will perhaps prove an efficacious method of ridding the market of spurious goods and protecting the public from injurious and poisonous foods.

Philadelphia.

Memorial Services.—On August 30 memorial services were held in honor of John D. Laukenau, the benefactor and president of the German Hospital for so many years, the occasion being the third anniversary of his death. The board of trustees and other hospital officials and invited guests attended the service held in the hospital.

Instruction to Mothers.—Talks to mothers on the feeding and care of infants by members of the profession who volunteered to do so, are from time to time given under the auspices of the Bureau of Health. The plan seems the beginning of a practical method of instructing mothers in the essentials of the rearing of infants—a subject on which there is much gross, not to say criminal, ignorance.

Municipal Hospital Changes.—Dr. Jay F. Schamberg, on August 31, tendered to the Department of Health his resignation as assistant physician to the Municipal Hospital. Dr. B. Franklin Royer, on September 1, entered on his duties as chief resident physician of the hospital, thus dispensing with the necessity of an assistant physician. Dr. William M. Welch, who becomes consulting physician to the institution, is to receive a salary of $2,000 a year. Dr. Royer will receive a salary of $2,500 a year.

Much Typhoid.—A surprisingly large number of cases of typhoid fever are reported in the city. For the week ended August 29 there were 133 new cases, for the succeeding week 104. Officials are somewhat at a loss to account for the source of the contagion because some wards supplied with filtered water show the largest number of cases. The Bureau of Health is making especial study of the cases to determine the source of the infection.——Smallpox has decreased, there being 10 new cases for the last week of August, and 12 the following week.

Improved Milk Supply.—Much has recently been done and is now in progress to improve the milk supply of the city and state. Dairy and Food Commissioner Warren is carrying on an active warfare against impure foods, including milk. Additional city milk inspectors have been appointed and all are instructed to do their work thoroughly and carefully. The public has been invited to bring samples of milk to the Bureau of Health and to have them examined free of charge. Milk shops have been closed when they have failed to keep up to a proper standard of cleanliness.

To Stamp Out Smallpox.—More drastic measures have been adopted to stamp out smallpox. All cases of smallpox will be removed to the Municipal Hospital, none will be treated in their homes, as has sometimes been allowed. The inmates of the house in which a case occurs will also be sent to the Municipal Hospital for disinfection. While the latter is being accomplished the house will undergo fumigation, the effectiveness of the latter to be determined by a bacteriologic test. The entire process will take about 24 hours, after which those who have been exposed will be allowed to pursue their vocation, provided they have been successfully vaccinated. If vaccination is refused, quarantine will be imposed.

RHODE ISLAND.

Vanderbilt Ward Opened.—On August 1 the Newport Hospital received the new Vanderbilt ward, said to have cost $250,000. Other gifts from this family make the total received from them by the hospital over $500,000.

Diphtheria at Naval Station.—There are said to be about fifty cases of diphtheria at the naval training station at Harbor Island, and a number of cases developed on the *Monongahela* while she was out on a cruise for a month.

Another Glanders Death.—The third death from glanders in the state occurred in Warwick August 18. The patient contracted the disease from his horse, ill with the disease, which he was treating. The first lesion was an ulcer of the face near one eye.

TENNESSEE.

Released on Bond.—J. D. Alston, a colored physician of Nashville, arrested on the charge of criminal malpractice whereby the death of a young negress is alleged to have been caused, has been released on bonds of $3,000.

Health of Knoxville and Nashville.—In July 14 cases of smallpox and 2 cases of measles were reported in Knoxville. The death rate for the month was at the annual rate of 11.40, or nearly fifty per cent. less than for the preceding month. Tuberculosis led the death-causes.——In Nashville there were 182 deaths during the month, and 112 births were reported.

Personal.—Dr. S. Walter Woodyard has been appointed a member of the pension examining board at Greenville.——Dr. Oscar Copeland, Chattanooga, has returned after a tour of Europe.——Dr. Alfred S. Horsley, Knoxville, has been appointed division surgeon on the Mexican International Railway, with headquarters at Monclova.——Dr. and Mrs. Owen H. Wilson, Nashville, are in Japan.——Dr. D. T. Gould has been elected house surgeon of the Nashville City Hospital.

Vanderbilt Faculty Changes.—The medical department of Vanderbilt University, Nashville, announces the following changes in its faculty: Dr. George C. Savage has been made secretary of the faculty; Dr. George H. Price, professor of physiology and diseases of the eye, ear, nose and throat; Dr. Samuel S. Briggs succeeds Dr. A. Bennett Cooke as professor of anatomy; Dr. Owen H. Wilson has been made clinical professor of diseases of children; Dr. W. F. Clary, Jr., assistant to the chair of medicine; Dr. W. C. Dixon, assistant to the chair of gynecology; Dr. Albert W. Harris, assistant demonstrator of anatomy and assistant to the chair of abdominal surgery; Dr. William Litterer, assistant to the chair of materia medica and therapeutics, and demonstrator of histology and pathology.

TEXAS.

Appropriation for Post Hospital.—Authority has been granted for the construction of a hospital at Fort Bliss to cost $20,000.

Epileptic Colony Opens in October.—The state board of managers for the epileptic colony announces that the buildings will be completed and ready for the reception of patients about October 1.

Trouble Brewing.—Many physicians and midwives are ignoring the law passed by the last legislature providing that all deaths and births be reported to the county clerk. The State Health Department announces that failure to comply with the law may be followed by prosecution.

Personal.—Dr. Benjamin F. Chambers, Palestine, who was recently assaulted and seriously injured, is making a good recovery.——Dr. Alva W. Carnes, Hutchins, physician at the Dallas County farm, is suffering from a dislocated shoulder and a fractured arm as the result of a runaway accident.——Dr. H. C. McClanahan, Manor, has been appointed assistant superintendent of the Gardner Sanitarium, Belmont, Cal.

WISCONSIN.

Insanity Increases.—The report of the State Board of Control for the year ended June 30 shows that there were 197 more insane patients in the state than in the previous year, the respective aggregates being 5,372 and 5,175.

Tuberculosis Leads.—The death-causes in Wisconsin for the past year, in order, were as follows: Tuberculosis, pneumonia, organic heart disease, accident, kidney disease, gastroenteritis, cancer, typhoid fever, cerebral congestion, hemorrhage and diphtheria.

Appoints Tuberculosis Commission.—Governor La Follette has appointed a commission, consisting of Dr. Gustav Schmitt, Milwaukee, Prof. H. L. Russell, bacteriologist at the state university, Madison, and Dr. Michael Ravn, Merrill, whose duty it is to determine the advisability of the establishment of a state hospital for the treatment of tuberculosis in human beings.

Personal.—Dr. George Alfred Elliott, assistant physician at Lake Geneva Sanitarium, has resigned and has gone to Colorado on account of the ill health of his wife.——Dr. William J. Cronyn has been made professor of medical jurisprudence in Milwaukee Medical College.——Drs. Camillis E. Richards and William C. F. Witte, Milwaukee, have returned from Europe.

Right to Practice.—Dr. L. W. Zochert, Fond-du-Lac, has sued Dr. J. H. Blekking, Hingham, for the recovery of $1,000 on alleged breach of contract. The defendant, in consideration of $1,000 and $300 equity in property, is asserted to have given the plaintiff the entire field in the town of Hingham. A temporary injunction has been granted restraining Dr. Blekking from practicing medicine within an eight-mile radius of Hingham.

GENERAL.

Personal.—Dr. Archibald N. Sinclair has been appointed a member of the Board of Medical Examiners of the Territory of Hawaii, in place of Dr. C. L. Garvin, resigned.

Leprosy Scandal in Porto Rico.—The alarm caused concerning leprosy and the danger of its spread from the colony at San Juan has caused extensive investigation, which is expected to place the colony under proper conditions, and will result in the enforcement of regulations.

A Queer Coincidence.—In the obituary columns of this issue will be found the names of Drs. Thomas Palmer Wynn of Durham, N. C., and Alexander Montague Atherton of New York, and the same names appear under marriages. Dr. Wynn died from ptomain poisoning four days after his marriage and Dr. Atherton died from a throat trouble of long standing three days after he was married.

Yellow Fever Spreads in Mexico.—Yellow fever is reported to be spreading in the vicinity of Monterey, Tampico, Linares and Victoria, Mexico. In some places it is epidemic. The daily death rate is large. The Mexican Central Railroad has suspended operation between Monterey and Tampico by order of the Mexican government. Texas is enforcing her quarantine and endeavoring to exclude the disease.

Rumors of a Plague in Cuba.—Some epidemic of unknown nature but of great fatality was rumored to be raging in Daiquiri, an isolated town in the province of Santiago, Cuba, among men employed in the iron mines. The lay press has devoted columns and scare heads to it, but every authority they have thus far referred to has contradicted the rumors. The basis of the report is evidently the request sent to Columbia University and Jefferson Medical College for aid in diagnosis and treatment of malarial complications at the point mentioned. Dr. C. J. Finlay, chief of the Cuban Health Department, cables his denial of the exaggerated story and has sent Dr. Guiteras to Santiago to investigate.

The American Journal of Orthopedic Surgery.—The first number of this journal has just appeared. It is to be the official publication of the American Orthopedic Association. Its first issue is a handsome, well-illustrated number of over one hundred pages. The editorial committee consists of Drs. R. W. Lovett, Boston, B. E. MacKenzie, Toronto, and Harry M. Sherman, San Francisco. It will be published quarterly and replaces the Transactions, Vol. 1 of the Journal being Vol. XVI of the Transactions. If the contents of the first number are an indication of the permanent character of the Journal it certainly deserves the support of that portion of the profession that is interested in its special subject.

Government Wants Pure Milk.—The Agricultural Department, realizing the importance of the question of pure milk in the large cities, has issued a bulletin giving valuable suggestions with reference to the preparation and delivery of the supply. The bulletin calls attention to the fact that the ideal vessel for the conveyance of milk remains to be discovered. The following points are emphasized:

The registration of all dairies.
Official indorsement of properly conducted dairies.
Inspection of all herds, barns, dairy buildings, etc., *once a month.*
Better lighting, ventilation, drainage and cleanliness of cow stables.
Whitewashing the interior of stables.
Eradication of tuberculosis from dairy herds.
Branding of condemned cows.
Cows not to be given swill feed, etc.
Cows to be regularly cleaned.
Pasturage for city cows.
Delivery of milk and cream in sealed packages.

Increased Longevity.—The International Congress of Insurance Actuaries held its session in New York City. A prominent feature in the discussion was the admitted fact that people are longer lived now than formerly. This was attributed to the growth of hospitals, the advance in medicine and surgery and the more enlightened care of the poor and suffering, particularly the children. John K. Gore of Newark, N. J., presented statistics showing that during the last five years of the century there had been a very perceptible decrease in the mortality rate. From 1870-1874, the period including the fatal smallpox epidemic of 1872, there was an increase in the death rate at every age group but one. From 1880-1884, the rate was relatively high owing to the great prevalence and wide distribution of diphtheria, scarlet fever and measles. The influenza epidemic of 1891 caused an augmented death rate from 1890-1894. As to causes, it was stated that there had been a remarkable decrease from phthisis and a slight decrease from typhoid in the northern countries. Most of the other causes, affecting chiefly adult lives, show large increases.

The American Association of Obstetricians and Gynecologists will hold its sixteenth annual meeting in the Northwestern University Building, Dearborn and Lake streets, Chicago, Tuesday to Thursday, Sept. 22-24, 1903. At 7:30 p. m. Wednesday the annual dinner will be served at the Auditorium Annex, at $3.00 a plate. Those who will attend should notify the secretary. The program is as follows:

TUESDAY, SEPTEMBER 22, 10 A. M.

Relationship of the Colon to Abdominal Tumors. Dr. James F. Baldwin, Columbus.

Ectopic Pregnancy. Dr. Henry D. Ingraham, Buffalo.

The Value of Vaginal Cesarean Section, with Report of a Case. Dr. Martin Stamm, Fremont.

The Limitations of Cesarean Section. Dr. E. Gustav Zinke, Cincinnati.

The Gilliam Operation. A Clinical Contribution. Dr. Edward J. Ill, Newark.

Hysteria as a Result of Chronic Atrophic Parametritis. A Contribution to the Study of Nervous Disturbances. Dr. W. A. Freund, Berlin.

TUESDAY, SEPTEMBER 22, 2.30 P. M.

Report of a Fourth Consecutive Successful Operation for Acute Perforated Gastric Ulcer with General Infection of the Peritoneal Cavity. Dr. Henry Howitt, Guelph.

Should the Uterus and Ovaries Be Removed in Operating for Double Pyosalpinx? Dr. Carlton C. Frederick, Buffalo.

The Technic of Gynecologic Operations and Treatment. Dr. Albert Vander Veer, Albany.

The Indications and Technic of Vaginal Drainage for Suppuration in the Pelvis. Dr. Albert Goldspohn, Chicago.

Shortening the Round Ligaments by the Blunt Hook Method. Dr. Howard W. Longyear, Detroit.

Extravaginal Elongation of the Cervix. Dr. Marcus Rosenwasser, Cleveland.

Report of Abdominal Sections During Pregnancy. Dr. Xavier O. Weber, Pittsburg.

TUESDAY, SEPTEMBER 22, 7:30 P. M.

Study of the Symptoms and Surgical Treatment of Intestinal Perforation in Typhoid Fever. Dr. W. D. Haggard, Nashville.

Rational Treatment of Postpartum Infection of the Uterus. Dr. D. Tod Gilliam, Columbus.

Conservative Surgical Treatment of the Uterine Adnexa. Dr. Augustus P. Clarke, Cambridge.

Traumatic Rupture of the Intestines without External Marks of Violence, with Report of Cases. Dr. George S. Peck, Youngstown.

Penetrating Gunshot and Stab Wounds of the Abdomen, with Report of Cases. Dr. John Young Brown, Jr., St. Louis.

Wednesday, September 23, 9:30 A. M.

Surgery of the Ileocecal Valve for Non-malignant Disease. Dr. N. Stone Scott, Cleveland.

Infantile Uterus, Scanty Menstruation, Amenorrhea and Dysmenorrhea Cured by Stem Pessaries. Dr. J. Henry Carstens, Detroit.

Tuberculosis of the Female Genitalia and Peritoneum. Dr. John B. Murphy, Chicago.

Appendicitis. Dr. Walter P. Manton, Detroit.

A Demonstration of Two Interesting Specimens, with Brief Histories. Dr. Xavier O. Werder, Pittsburg.

Wednesday, September 23, 12 M.

Memorial Address on the Life and Character of William E. B. Davis. Dr. Lewis S. McMurtry, Louisville.

President's Address. Dr. L. H. Dunning, Indianapolis.

Wednesday, September 23, 2:30 P. M.

The Choice of Methods for Closing the Abdominal Incision. Dr. Edward Ricketts, Cincinnati.

Cysts of the Kidney Resembling Ovarian Tumors, with Cases. Dr. Rufus B. Hall, Cincinnati.

Hysterectomy in Infectious Diseases of the Uterine Appendages. Dr. Harry C. Deaver, Philadelphia.

Supravaginal Amputation for Fibroid Tumors, with Report of Cases. Dr. H. E. Hayd, Buffalo.

The Scope and Limitation of Myomectomy in the Treatment of Fibroid Tumors of the Uterus. Dr. L. S. McMurtry, Louisville.

Coincident Tubal and Uterine Pregnancy, with the Report of a Case. Remarks. Dr. Frank F. Simpson, Pittsburg.

Thursday, September 24, 10 A. M.

Symptomatology of the Pelvic Musculature. Dr. Hugo O. Pantzer, Indianapolis.

Palliative Treatment of Cancer of the Cervix. Dr. Walter B. Chase.

Abdominal Versus Vaginal Hysterectomy in Carcinoma Where the Radical Operation is Warranted. Dr. John B. Deaver, Philadelphia.

An Analysis of Common Causes of Death Following Pelvic and Abdominal Operations. Dr. Joseph Price, Philadelphia.

Total Extirpation of the Vagina for Carcinoma. Dr. Charles G. Cumston, Boston.

The Use of Veratrum Viride in Surgical and Obstetrical Practice. Dr. Charles L. Bonifield, Cincinnati.

Thursday, September 24, 2:30 P. M.

Anesthesia in Abdominal Surgery. Dr. J. J. Gurney Williams, Philadelphia.

Further Preliminary Notes on Ovarian Grafting. Dr. Robert T. Morris, New York.

Clinical Demonstration of Special Points of Surgical Interest. Dr. John B. Murphy, Chicago.

Emergency Abdominal Surgery at the Patient's Home. A Demonstration. Dr. W. G. MacDonald, Albany.

FOREIGN.

Typhus in Bavaria.—Four hundred cases of typhus are reported in two regiments of the Bavarian infantry at Hammelburg, Bavaria.

Ismailia Free from Mosquitoes.—It is reported in London that as a result of the measures for the extermination of mosquitoes in Ismailia, malaria has dropped from 569 cases in the period January to May, 1902, to 72 in the same period for 1903. It is predicted that malaria will practically disappear. Mosquitoes are rare and mosquito netting is almost made unnecessary. Work is still progressing on filling up pools and preventing stagnant water.

Homage to a Physician in Frankfurt, Germany.—Dr. T. Neuburger has practiced medicine at Frankfurt a. M. nearly half a century, and the arrival of his fiftieth professional anniversary was celebrated by his friends by a gift of $19,000. He added to the sum and has set it apart as a permanent endowment for scientific medical research to be known by his name. His latest contribution to medical literature was an article on the connection between sclerosis of the coronary arteries and affections of the heart muscle.

Propagation of Giants.—A large legacy was left by Count Alfred St. Ouen de Pierrecourt to his native city of Rouen on condition that provision be made for propagating a race of giants. The natural heirs began litigation, which has now resulted in an agreement that the city shall found an institute for giants, keeping a large fund in reserve and giving the balance to the legitimate heirs. It is proposed to maintain a score or more of giant couples, establishing workshops for them and conditions favorable for scientists to observe the result of the progeny of giant couples. Dr. H. Meige of Paris published a protest against the idea some months ago, claiming that giant growth is pathologic. His remarks on the subject were reviewed in The Journal at the time, page 274 of the last volume.

Tragic Sequel to the Muehlhausen Contract Practice Trouble.—Our German exchanges have carried for many weeks a notice warning medical men not to enter into negotiations with the sickness insurance societies at Gera and Mühlhausen "without consulting the undersigned." Our readers will remember the resignations at these places of the medical officers of the sickness insurance societies on account of the prevailing intolerable conditions of the service. The warning ads were signed by the presidents of the district medical associations and by the president of the "Leipziger Verband." Dr. Schloss represented Mühlhausen. The cable now brings word of his death. It was at first ascribed to the results of a duel which he fought recently with the manager of the sickness insurance society, and the latter was arrested, but it has since been established that his death was due to sepsis after an operation. The state interfered in the matter of the medical attendance of the society, as was chronicled in The Journal at the time, the physicians practically gaining their point. The warning ad still appears in our German exchanges, but it refers only to Gera at present.

Physicians' Signs in Germany.—The latest decree of the Berlin Medical Court of Honor is directed against supernumerary signs hung out by physicians. It states that a single sign is enough, and any additional ones impinge on unethical advertising methods. The only exception is in case a physician resides in a corner house, when a sign on each of the streets is permissible. Proceedings were instituted against a Dr. Sternberg because he used more than one sign, and in his defense he cited another physician in Berlin who followed the same custom. The Court of Honor drew up a notice to the physician cited, warning him that he must restrict himself to a single sign, and published this notice in a Berlin daily paper. It concluded with the warning that if he did not comply with the specified order he would be summoned officially before the court. The *Allg. Med. Ct.-Ztg.* comments on the lack of tact shown in the publicity given to this notice, and adds that in the confusing multiplicity of street signs in a city a single, modest sign might easily be overlooked, and that it is for the interest of the public to have the physician's sign apparent, and if necessary to have more than one.

Increase of Heart Disease in Young Men in Germany.—The Prussian War Department has recently issued a pamphlet stating that the number of soldiers with heart disease amounted to 1.5 per 1,000 between 1885 and 1886. The proportion has gradually increased until the cases now number 3.1 per 1,000 of all the men in the service. In 1894 the proportion among the young men arriving at the age of military duty was 9.9 per 1,000, but in 1898 it had risen to 17.4 per 1,000. Kraus, Strickler and Landgraf have been studying the subject more closely, and Strickler does not hesitate to declare that the cause of this greater prevalence is the increasing degeneracy and nervousness of the youth of the land. Chronic valvular defects, he adds, exclude the subject from military service, but there are exceptionally functional heart disturbances which may allow military service, preferably in the cavalry or artillery. Special training of military medical officers in the diagnosis of heart diseases, both for treatment and for exclusion of "damaged recruits," will aid in reducing the percentage on the army list. In discussing the causes of the degeneracy of the youth to which he refers, he lays stress on the premature application of boys to arduous work, irregular hours of rest and work, deficient physical development, early use of alcohol and tobacco, sports in excess, especially bicycle riding, rowing and swimming, and dislike of physical exercise among certain classes. The frequency of hysteria and neurasthenia among the youth is also commented on, and the fact that these injurious factors may cause alterations in the heart muscle or merely an undue excitability and irritability. The acute diseases which have a special tendency to involve the vascular system have not increased in intensity or extent during the last twenty years, but the reappearance and prevalence of the grippe has evidently had a large share in the increased morbidity of the heart, either directly or by entailing prolonged weakness of the organ, rendering it less resistant.

LONDON LETTER.

The Declining Birth Rate of Australia.

The declining birth rate of native Americans, which has caused so much concern, is exactly parallel in Australia. Mr. Coghlan, the Australian statistician, has recently written on the subject. He points out that the fall in the birth rate in Australia and New Zealand taken together is such that there are annually fewer births by nearly 20,000 than would have occurred if the rates prevailing as late as ten years ago had been maintained. New South Wales furnishes a striking example. In 1887 there were in this state 112,247 married women under the age of 45; in 1901 there were 149,247, yet the number of children born was about the same in each year. The legitimate birth rate per 10,000 married women under the age of 45 is 239; in 1891 it was 276. A curious fact is that the decline occurs in every class, among people of every shade of opinion, except among women of Irish birth, who exhibit no decline. But as the proportion of women of Irish birth is fast decreasing that element in maintenance of the birth rate will soon disappear. Large as is the area of the Australian continent Mr. Coghlan thinks it is impossible that its people will ever become truly great under the conditions affecting the increase of population which now exist. Immigration has practically ceased to be an important factor, the maintenance and increase of the population depending on the birth rate alone—a rate seriously diminished and still diminishing.

The Cancer Research Fund.

This organization is being developed on a wide basis, not only in the United Kingdom and the colonies, but also in co-operation with kindred organizations in America and on the Continent. The investigations fall mainly into three groups—experiments, therapeutics and statistics. It was deemed premature to give details of the experiments, but sufficient indications are given to show the value of the study of cancer throughout the animal kingdom and of attempts to facilitate early diagnosis. Although cancer research committees have been active in civilized countries for some time, little is known of its distribution in the lower races of mankind and still less in the lower animals. The necessity for securing farm accommodation where animals may be kept under observation is stated. Under therapeutics only the electric and light treatment is touched on. The beneficial action of the Röntgen rays in rodent ulcer is shown, but no similar results have been obtained in deep-seated growths, although in some cases relief of pain and temporary arrest of growth have been recorded. The lead of the German and other committees in reference to the questions of the increase of cancer contagion, cancer houses and cancer areas has not been followed. Such inquiry is regarded as futile until it can comprise differentiation of the various forms of cancer. An attempt is being made to compile statistics from the best available material—the records of the great hospitals in which the diagnosis has been verified by pathologic examination.

Trypanosomiasis Expedition from the Liverpool School of Tropical Medicine.

The Liverpool School of Tropical Medicine has decided to despatch next month a trypanosomiasis expedition to the Congo Free State. The expedition has been arranged with the co-operation of the government of the Congo Free State. The latter has contributed generously toward the expenses, which will be heavy. The objects of the expedition will be to report on the sanitary conditions of Boma, Leopoldville and other important centers and to make recommendations for their amelioration. Secondly, it will continue the work on trypanosomiasis, human and animal, commenced in the Gambia by Dr. Dutton in 1901, and continued for the past twelve months in the Gambia and Senegal by Dr. Dutton and Dr. Todd, including the occurrence and distribution of trypanosoma in the Congo, the carriers of the parasite and the relation of trypanosoma to sleeping sickness. As the investigations will involve the examination of the blood of wild animals, the Congo Free State is making arrangements for the expedition to participate in drives of big game up country and is facilitating their work in every possible manner. The expedition is under the charge of Dr. J. E. Dutton and consists of himself and Drs. J. L. Todd and C. Christy. Dr. Dutton was a member of the Southern and Northern Nigeria Expedition of the Liverpool School, 1899-1900, the leader of the Gambia expedition, 1901-1902, and of the Senegambia expedition, 1902-1903. Dr. Todd was a member of the latter expedition. Dr. Christy was a member of the commission of the Royal Society appointed to investigate sleeping sickness in Uganda and Central Africa, and has had a large tropical experience. Every facility for travel has been placed at the disposal of the school by Sir Alfred Jones, its chairman and munificent patron, whose interests in West Africa, commercial and philanthropic, are well known.

Correspondence.

Notes from Berlin.

Berlin, August, 1903.

To the Editor:—Berlin is a sort of surgical heaven—at least for the surgeon. Where else shall one find so many masters teaching at one time as in and around the old Charité, fast being replaced by the new Charité. Professor König, 70 odd years young, operates every morning at 9:30, and what a ripeness of experience and sobriety of judgment are embodied in his work. Every afternoon at 2 Professor von Bergmann, surrounded by a white cloud of assistants, operates in the Langenbeckhaus. Both men are kindly, benignant and deliberate; both cut to the bone at the first stroke, if there is any bone; both use silk sutures and pour on iodoform by the spoonful. In both clinics the patient is usually anesthetized before the class, and often takes the anesthetic badly, and in both a nervous student not infrequently decorated with fresh facial cross-hatchings—how is it the professors rarely show a mark?—is invited into the arena to show how many things he doesn't know about the case in hand.

Beside these there are in surgery Krause, Israels and Sonenburg, and before speaking of other things, the closely allied chairs of pathology and anatomy. To hear Professor Waldeyer, another hale youth of 70 odd, describe the coquetries of the peritoneum at 7:30 a. m. is a treat for gods and men. Where shall one find such simple elegance of diction, such force through clearness, such restraint except when it comes to citing authorities? He resolves the multitudinous drape into its simplest elements and relations, he holds it up and spreads it out before you until it fairly beseeches you to retain and admire its every fold; a master truly. Difficult points are illustrated by specially prepared dissections and every facility which intelligent ingenuity can devise is brought into service for the student. *If* anatomy is the preface to surgery, pathology is too often the postscript. Not too rarely does the student see the cases he has watched in the clinic demonstrated in the department of Professor Orth, the able successor of Virchow. Here the autopsies begin at 7 a. m., and before the student leaves the building the lesions are demonstrated in detail by assistants. The principal organs, including the brain and long bones, are sectioned and assembled in another room and the microscopic structures are shown in a third. The rapidity and thoroughness with which everything of interest pertaining to each case is demonstrated is marvelous. So much can not be said of the valuable collection in the pathologic museum, which is closed to the public except for two hours on Sunday. It was opened to our party on presentation of cards to Professor Orth. The museum is specially rich in bones, and in complete skeletons of scoliotic and kyphotic individuals, but some of the cases stand in a poor light and the labels are written in a tiny blind chirography, which was in many instances undecipherable. If the labels were printed or written two or three times as large in a catalogue hand the value of the collection to the visitor would be doubled.

The dermatologists, Professors Lassar and Lesser, are great favorites of the students, not only from the importance of their subjects, but because both show many patients and are clear and interesting speakers; both hold daily clinics, the former in the Karl Strasse, the latter in the Charité. Professor Ohlhausen, who operates daily at 8 a. m. at the Frauenklinik in the Artillerie Strasse, impresses one at once as a man of originality, dexterity and force. He is a neat, rapid operator, never missing a stroke, and his methods are thoroughly modern. Professor Hoffa, recently transferred from Würzburg, has a beautifully equipped sanatorium in the Achenbach Strasse, where he does his private work. The public clinic on the other side of the city is also equipped with special apparatus for mobilizing joints and correcting deformities, with workshops and plaster and operating rooms. Tendon grafting is extensively practiced; the routine duration of the bloodless replacement and treatment of dislocated hips is about three months. Professor Joachinsthal also has an interesting clinic for deformities. The sanatorium of the late Dr. Beely is continued under his brother and Drs. Loff and Eckstein, and is especially notable for the variety of corrective apparatus for scoliosis. Dr. Eckstein has been doing high-grade work in the correction of facial and other deformities by the injection of melted paraffin. It was the writer's privilege to see several noses and an umbilical hernia treated by this method; the results were very gratifying. Dr. Eckstein believes that by using a paraffin of high melting point (58 C.) the dangers and disadvantages of vaselin and low-melting paraffin are very largely abolished.

His technic is simple and effective, the principal points being that the syringe and base of the needle are covered with rubber tubing, and a little hot water is drawn into the needle to prevent too rapid cooling. In conclusion, I would say that for the physician who understands German and who knows what he wants, the facilities for study in Berlin are exceptionally fine. Henry Ling Taylor.

New York address, 125 W. 58th Street.

Dissatisfaction with Medical Legislation.

Shelbyville, Ind., Sept. 5, 1903.

To the Editor:—In Chapter II, Article 1, Section 1, of the Principles of Medical Ethics, we find this clear and emphatic statement: "It is inconsistent with the principles of medical science, and it is incompatible with honorable standing in the profession, for physicians to designate their practice as based on an exclusive dogma or a sectarian system of medicine."

My son, after graduating in a regular school of medicine, went before the State Board of Examination and secured a certificate of competency signed by a physio-medical as president and an eclectic as secretary, who also advertised himself as a homeopath and a graduate of Pratt's School of Orificial Surgery.

Now, my son, as well as myself, feel very much humiliated when we are reminded that he is practicing medicine by the courtesy and under the certificate of two gentlemen who, according to the principles of medical ethics, have no *honorable standing* in the medical profession.

For this and various other reasons I have been dissatisfied with some of our recent medical legislation.

W. G. McFadden.

Habits at Mineral Springs.

Paris, Ill., Sept. 5, 1903.

To the Editor:—I wish to protest through The Journal against the practice of washing the drinking glasses used by consumptives, syphilitics, etc., in the soda spring at Manitou, Colo. I spoke to several parties while at Manitou, but some claimed that the ingredients of the water disinfected the glasses and others said that the spring was overflowing all the time and purified itself in that way. I have seen the water lowered two or three inches below the brink when there was a rush. I am told the bottling works use a different spring, which I hope is true. I am also told that the same filthy practice is followed at Waukesha, Wis., but I hope it is not so. W. H. Ten Broeck.

Marriages.

George R. Gilbert, M.D., Cumberland, Wyo., to Miss Dora C. Roys of Peru, Neb.

Thomas Palmer Wynn, M.D., to Miss Alberta Robbins, both of Durham, N. C., August 19.

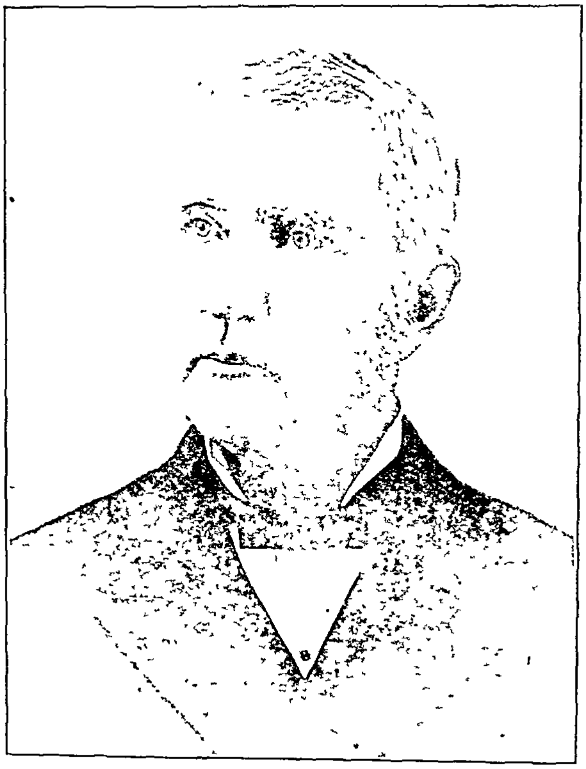
Alexander S. McCaig, M.D., Sault Ste. Marie, Ont., to Miss Margaret Shanks of Mattawa, Ont., September 1.

James G. Pope, M.D., Coleman, Texas, to Miss Virginia Joost of Tallahassee, Fla., at Palatine, Texas, August 30.

Alexander Montague Atherton, M.D., of New York City, to Miss Ellen Louise Baker of Providence, R. I., August 25.

Deaths.

James Farquhar Hibberd, M.D., an esteemed member of the American Medical Association, of which he was president in 1894, died September 8 at his home in Richmond, Ind., after a long illness, aged 86 years. He was born at Monrovia, Md., Nov. 4, 1816, and received his academic education at Benjamin Hallowell's School, Alexandria, Va. Then, choosing the medical profession for his career, he read with his cousin Dr. Aaron Wright for one year, attended medical lectures in 1839 and 1840 at Yale University, and on Aug. 14, 1840, began practicing at Salem, Ohio. After seven years he went to New York and there took a two years' course at the College of Physicians and Surgeons, receiving his degree in 1849. He was at once made surgeon of the steamship *Senator*, sailing from New York to San Francisco, a voyage consuming seven and one-half months; thus Dr. Hibberd was made a "Forty-niner." He remained for six years in California practicing medicine and engaging in business with financial success. In 1855 he returned to the East and spent the winter in post-graduate study. In June, 1856, he opened an office at Dayton, Ohio, but four months later removed to Richmond, Ind. During the sessions of 1860 and 1861 he was professor of physiology and general pathology in the Ohio Medical College, Cincinnati. Early in his career he was one of the founders of the Ohio State Medical Society, and was later one of the chief organizers of the Indiana State Medical Society, and of the Wayne County Medical Society. He was a member of the American Medical Association since 1863, serving as its first vice-president in 1865. He was also a member of the Union District Medical Society, the Mississippi Valley Medical Association and Rocky Mountain Medical Association, in all of which societies he held official positions, and of most of which he was at one time president. He was an honorary member of the state medical societies of Ohio and California, and had been a member of the American Public Health Association for more than twenty years. In 1863, after the battle of Stone River, he was for some time in charge of the corps of volunteer surgeons and nurses at Murfreesboro, Tenn. In 1869 he went abroad for a year. During the years 1875 and 1876 he was mayor of Richmond, and in 1881 health officer of Wayne County. He was a member of the Ohio legislature in 1845, 1846 and 1847. In 1885 the University of Indiana conferred on him the degree of LL.D. In 1842 he was married to Nancy D. Higgins, who died four years later, leaving one son, who still survives; in 1856 he was married to Catherine Leeds, who died twelve years later, leaving one son, and three years later he was again married, to Elizabeth M. Laws.



JAMES FARQUHAR HIBBERD, M.D.

George B. Russel, M.D. Jefferson Medical College, Philadelphia, 1836, who did heroic work in the cholera epidemics of 1836, 1844 and 1845 in Philadelphia; one of the pioneer physicians of Detroit; who influenced Mr. Harper and Nancy Martin to found Harper Hospital, and was the active medical head of that institution for a quarter of a century, died at his home in

Detroit, August 31, aged 87, a week after having been run down by a bicyclist.

Robert A. Patchin, M.D. University of Buffalo (N. Y.) 1869, a member and sometime president of the Polk County Medical Society; a member of the Iowa State Medical Society, Iowa State Association of Railway Surgeons, and International Association of Railway Surgeons, died at his home in Des Moines, Iowa, August 31, from an acute exacerbation of liver disease from which he had suffered for several years, aged 53.

Charles Brooks Brigham, M.D. Harvard University Medical School, Boston, 1870, surgeon during the Franco-German War, and Chevalier of the Legion of Honor for services there rendered; for many years surgeon of the Southern Pacific Railroad, died at his home in San Francisco, from apoplexy, August 23, after an illness of six weeks, aged 58.

Frank N. English, M.D. Chicago Homeopathic Medical College, 1886, of Mendota, committed suicide by severing the jugular vein and large arteries of the neck with a pocket knife, August 31, while under temporary confinement in the Mendota city jail on the charge of causing the death of a patient by a criminal operation. He was about 55 years old.

R. Henderson Graham, M.D. Columbus (Ohio) Medical College, 1879, a member of the Medical Association of the District of Columbia, the American Medical Association, and the American Therapeutic Society, died August 24, at Garfield Hospital, Washington, D. C., from peritonitis, which developed four days after an operation for appendicitis, aged 53.

Joseph A. Stout, M.D. Medical College of Ohio, Cincinnati, 1845, a pioneer of La Salle County, Ill.; one of the original abolitionists, and connected with the so-called "underground railroad," and a member of the American Medical Association, died at his home in Ottawa, August 25, after a long illness from paralysis, aged 85.

Charles Hart Boynton, M.D. Berkshire Medical College, Pittsfield, Mass., 1853, for two years president of the White Mountain Medical Society, and a member of the New Hampshire Medical Society, for two terms a member of the legislature, died at his home in Lisbon, August 16, from cerebral hemorrhage, aged 76.

George H. Cummings, M.D. College of Physicians and Surgeons, New York, 1875, for many years a member of the board of health of Portland, Maine, and also city physician, died suddenly from acute indigestion while on a yachting cruise near Booth Bay, Maine, August 22, aged 53.

Charles C. Lewis, M.D. University of Louisville, 1873, was found dead in his office in Owensboro, Ky., August 30, from angina pectoris, aged 54. He was vice-president of the Kentucky State Medical Society in 1902, and was a member of the Owensboro Board of Education.

William E. Allen, M.D. Albany (N. Y.) Medical College, 1856, an acting assistant surgeon during the Civil War, and health officer of Scranton, Pa., for many years, died from cancer of the bladder after a long illness, August 20, at his home in Scranton, Pa., aged 66.

William L. Northway, M.D. Chicago Homeopathic Medical College, 1879, of Marcellus, N. Y., died at the Hospital of the Good Shepherd, Syracuse, N. Y., from congestion of the brain, August 21, after an illness of two weeks, aged 51.

Edward C. Kearney, M.D. Western Reserve University, Cleveland, 1876, a member of the Allegheny County (Pa.) Medical Society, died at his home in McKeesport, August 31, from heart disease, after an illness of three hours, aged 59.

Newton Sager, M.D. Jefferson Medical College, Philadelphia, 1843, for sixty years a practitioner of Lafayette, Ohio, died at his home in that place, August 22, from cancer of the face, after a long period of suffering, aged 85.

Frederick A. Vigor, M.D. Columbus (Ohio) Medical College, 1879, of New Dover, Ohio, died at the home of his parents in Brandon, Ohio, August 24, from paralysis, after an illness of a year, aged 56.

Zachary Taylor Chrisman, M.D. University of Pennsylvania, Philadelphia, 1873, died at his home in Warwick, Pa., August 23, from Bright's disease, after an illness of about two years, aged 52.

Henry M. Hunter, M.D. College of Physicians and Surgeons, Baltimore, 1886, formerly of Union Springs, Ala., died at his home in San Luis, Potosi, Mexico, August 26, from pneumonia.

Robert D. Hudson, M.D. University of Pennsylvania, Philadelphia, 1879, formerly of Atchison, Kan., was found drowned in the Neosho river, near Emporia, Kan., August 24, aged 57.

Amadon Manley Piersons, M.D. New York Homeopathic Medical College and Hospital, 1868, died at his home in New York City, August 28, after a lingering illness, aged 65.

Joseph D. Casey, M.D. Jefferson Medical College, Philadelphia, 1892, died from paresis at his home in Latrobe, Pa., August 22, after an illness of several months, aged 33.

Lewis B. Ruhlman, M.D. Eclectic Medical Institute, Cincinnati, 1877, of North Lima, Ohio, died suddenly from heart disease in Youngstown, Ohio, August 24, aged 56.

Charles S. Stanley, M.D. Boston University School of Medicine, 1880, died from angina pectoris at his home in Amesbury, Mass., August 19, after a short illness, aged 64.

Thomas Palmer Wynn, M.D. University of Maryland, Baltimore, 1886, of Durham, N. C., died suddenly in New York City, August 23, from ptomain poisoning, aged 42.

Thomas Howard Wilson, M.D. University of Pennsylvania, Philadelphia, 1844, died at his home in Lewisburg, Pa., August 21, after a prolonged illness, aged 82.

Stephen C. Gillette, M.D. Rush Medical College, Chicago, 1852, a member of the Fox River Valley Medical Association, died at his home in Aurora, Ill., September 3.

John Bostwick Lundy, M.D. University of Buffalo (N. Y.), 1851, died at his home in Preston, Ont., from paralysis, August 20, after an illness of one week, aged 77.

Harvey K. Leonard, M.D. Hahnemann Medical College, Philadelphia, 1881, died suddenly from heart disease at his home in Plymouth, Pa., August 23, aged 49.

Dean Seaman, M.D. Jefferson Medical College, Philadelphia, 1879, was found dead in bed at his home in Beaver Dams, N. Y., August 22, from apoplexy, aged 47.

Theodore A. Collett, M.D. University of Michigan, Ann Arbor, 1867, a pioneer physician of Iowa, died at his home in Ida Grove, August 27, from apoplexy.

Jesse C. Hancock, M.D. Miami Medical College, Cincinnati, 1866, the oldest physician in Trimble County, Ky., died at his home in Bedford, August 23.

Edmund Y. Meyer, M.D. Missouri Medical College, St. Louis, 1887, died at the City Hospital, St. Louis, from acute alcoholism, August 30, aged 39.

Barton K. Mynatt, M.D. University of Nashville, 1854, died suddenly at his home in Washington, Tenn., August 29, from heart disease, aged 78.

John S. Wentz, M.D. University of Pennsylvania, Philadelphia, 1855, died at his home in Drifton, Pa., August 28, from paralysis, aged 75.

Thomas A. Ablett, M.D. Cleveland Homeopathic Medical College, 1895, died from diabetes, August 7, at his home in Glennie, Mich., aged 35.

James M. Blair, M.D. Transylvania University, Lexington, Ky., 1849, died at his home in Corsicana, Texas, August 13, aged 86.

Charles Howard Gordon, M.D., 1876, died at his home in Lodi, Cal., August 24, from diabetes, after a long illness, aged 71.

David B. Cotton, M.D. Jefferson Medical College, Philadelphia, 1856, died at his home in Portsmouth, Ohio, August 30, aged 70.

Alexander Montague Atherton, M.D. Johns Hopkins University, Baltimore, 1901, died at Liberty, New York, August 28, aged 28.

George C. Dugas, M.D. Medical College of Georgia, Augusta, 1878, died suddenly at Augusta, Ga., August 28, aged about 50.

Oliver E. Tillson, M.D. Eclectic Medical Institute, Cincinnati, 1862, died at his home in West Alexandria, Ohio, August 28.

David Wolf, M.D. Eclectic Medical Institute, Cincinnati, 1852, died recently at his home in West Alexandria, Ohio.

Benjamin W. Sparks, M.D. New York University, 1859, died at his home in McMinnville, Tenn., August 29, aged 67.

Stephen R. Mason, M.D. Rush Medical College, Chicago, 1851, died at his home in Devall Bluff, Ark., August 20.

Samuel W. Chandler, M.D. University of Michigan, Ann Arbor, 1872, died recently at his home in Saline, Mich.

W. H. Morris, M.D. Missouri Medical College, St. Louis, 1866, died at his home in Sharon, Mo., August 2.

William A. Jones, M.D., died at his home in Sturgis, Ky., August 18, from paralysis, aged 70.

Frank C. Fraser, M.D. McGill University, Montreal, 1898, died recently in Montreal.

Joseph E. Kirkley, M.D., died at his home in Beckville, Texas, August 15.

Deaths Abroad.

William E. Salazar, College of Physicians and Surgeons, New York, of Havana, Cuba, physician in charge of the American Hospital at Tampico, Mexico, died recently at Tampico from yellow fever, aged 29.

George William Balfour, M.D. St. Andrews, 1845; F.R.C.P. Edinburgh, 1861, one of the most celebrated physicians and teachers of the Edinburgh Medical School, died recently, aged 81. His principal work was done on the diseases of the heart. Among his published works were "An Introduction to the Study of Medicine," "Clinical Lectures on Diseases of the Heart," and "The Senile Heart." As a young man he had the courage and originality to promulgate the heresy that the routine treatment of pneumonia by antimony and blood-letting was unnecessary and harmful. He was a member of the Royal Medical, Medico-Chirurgical and Obstetrical societies and consulting and attending physician to many hospitals.

Book Notices.

Organic Nervous Diseases. By M. Allen Starr, M.D., Ph.D., LL.D., Professor of Diseases of the Mind and Nervous System, College of Physicians and Surgeons. Illustrated with 275 Engravings in the Text and 26 Plates in Colors and Monochrome. Cloth. Pp. 751. Price, $6.00 net. New York and Philadelphia: Lea Brothers & Co. 1903.

As the title indicates, this book treats of only the organic nervous diseases. So-called functional diseases, such as epilepsy, hysteria, paralysis agitans, etc., are not considered, nor are trophic disturbances, as acromegaly, and Raynaud's disease. The opening chapter is a discussion of the structure of the nervous system based on the neuron hypothesis. One hundred and thirty-four pages are devoted to the peripheral nerves, and about one-half of these to the various forms of multiple neuritis, which are discussed in a thorough manner and illustrated by a number of the author's cases. Diseases of the spinal cord are given 236 pages. The chapter on the diagnosis and localization of spinal cord diseases demonstrates clearly how careful observation of signs and symptoms will enable a physician, equipped with a knowledge of the anatomy and physiology of the cord, to make an accurate diagnosis by a more logical process than in any other class of diseases. The remaining 320 pages are devoted to diseases of the brain, including an exhaustive chapter on localization and general diagnosis. As stated by the author, his conclusions are largely based on clinical and pathologic data collected by himself in twenty years of neurologic practice. Hence, we are not only presented with old facts in a new and improved form, but offered new observations and suggestions in connection with nearly every subject treated. Illustrative cases from the author's practice are frequently narrated. Where divergent views are held, they are fairly stated. Thus, after stating the present opposing views concerning the nature of the regeneration in severed nerve fibers he suggests that the process may vary, according to the stage of degeneration reached; if advanced, healing must proceed from the proximal stump; if not advanced, it may take place from the neurilemma of the peripheral end. It is an interesting suggestion that many cases of multiple neuritis following infectious diseases, such as typhoid fever and pneumonia, or appearing in the course of tuberculosis, are caused by the alcohol used in the treatment of the primary disease. Another plausible suggestion is that most cases of so-called acute myelitis, particularly those of very sudden onset, really are instances of softening due to vascular disease. The statement that brachial neuritis is fully as frequent as sciatica may not be generally accepted by clinicians. Pathologists will hardly accept the statements that cerebral emboli may be derived from thrombi in the saphenous veins (except in the case of an open foramen ovale, which is not mentioned), that tumors of the pituitary body are usually of the nature of fibroma or myxoma, and that the chalky plaques frequently seen in the arachnoid are beginning psammomata. They will claim that carcinoma of the vertebræ is always secondary, not merely "usually" so. It is stated as a fact that general paralysis begins with changes in the vessels. Bacteriologists will feel strangers to the *Streptococcus aureus*, and will give to the pneumococcus a relatively more important place in the etiology of meningitis than the author has done. The following statements sound peculiar: "Solitary tubercles are occasionally found throughout the cord," and "Retention of urine is liable to set up catarrhal conditions, and finally cystitis." The term "neuron" is used in some places to indicate both cell and axon, in others the cell alone. It is deplorable that the author will aid to perpetuate the ambiguous term "dorsal" instead of "thoracic" region of the spine and cord. The term "acute progressive paralysis" for Landry's paralysis, though in itself a good one, must be condemned, as "progressive paralysis" is now commonly used to designate general paralysis of the insane. However, a few defects must be expected in a book which is so strikingly one man's work. The personality of the author is felt on every page, though other authorities are freely quoted and references given in foot notes. The work deserves special commendation for the pains taken in pointing out underlying pathologic conditions and the logical necessity of their producing certain definite symptoms. The subject of treatment is by no means neglected. Thus, eight pages are devoted to the treatment of tabes, and seven to that of apoplexy. After pointing out that it is not possible to arrive at a positive diagnosis between a clot and softening in more than one-half of the cases he adds: "When it is impossible to make an accurate diagnosis between hemorrhage and thrombosis or embolism it is not safe to employ active medication directed to either condition lest the damage to the brain may be increased." And speaking of the use of potassium iodid to absorb a clot, he says: "Those who believe it will accomplish any result may continue to use it." The illustrations are abundant and uniformly excellent. Some are original, though most of them have been borrowed. Those in the recent work of Schmaus and Sacki on the pathology of the spinal cord have been heavily drawn on and well reproduced.

Disease of the Pancreas. Its Cause and Nature. By Eugene L. Opie, M.D., Associate in Pathology in the Johns Hopkins University. Cloth. Pp. 359. Price, $3.00. Philadelphia and London: J. B. Lippincott Company. 1903.

This book is a good example of what all will agree is the most desirable kind of medical literature in this country in which medical book publishers issue almost exclusively books that are fairly certain to have a respectable sale, such as textbooks of all kinds, large and small, compends, etc. Of course we can not expect medical publishers to become so philanthropic that they will publish many medical books at financial loss, simply because they are good books, but it is most desirable that the facilities for the publication of monographs and books dealing exhaustively with limited subjects be encouraged. Perhaps the best way to persuade the publishers of the desirability of this innovation is, first, to offer for publication really first-class material, and, secondly, when books like Opie's Diseases of Pancreas are published to help increase the sales. In this particular instance the qualities of the book, the amount of important, original work of direct interest to the physician and surgeon, that is set forth in a simple yet delightful style, are bound to secure for the book many readers. The contents are of interest alike to the physician and surgeon. To quote from the preface: "The recognition of pancreatic lesions, their causes and their consequences, is of great importance, not only to the physician, but notably to the surgeon who opens the abdomen. For illustration, disseminated fat necrosis indicates grave disease of the gland; acute pancreatitis is a not infrequent consequence of cholelithiasis; while chronic pancreatitis, which accompanies the same condition, is frequently mistaken for malignant growth. To the student of internal medicine few conditions present greater difficulties of diagnosis than do the various forms of pancreatic disease; but with increasing knowledge of their etiology, their nature, and their relation to other diseases, means for their recognition are closer to hand." Of the contents may be mentioned chapters on the anatomy of the pancreas, the anomalies, the microscopic anatomy, including the islands of Langerhans; varieties of acute pancreatitis, the etiologic relation of gallstones to acute hemorrhagic pancreatitis, fat necrosis, chronic interstitial pancreatitis, its varieties and etiology; diabetes mellitus and its relation to lesions of the pancreas; bronzed diabetes; the symptoms and treatment of pancreatic disease. The illustrations are helpful and tasteful; there are interesting reproductions of the original drawings of Santonini, showing both ducts of the pancreas and the papillæ in the duodenum; the principal lesions are well illustrated. Opie's book is a most important addition to the literature of the pancreas and its diseases, and should be found in the library of every progressive physician and surgeon. The amount and quality of new, original work here set forth has advanced greatly our knowledge of the pancreas and its diseases, and the book will always be a landmark in the history of the pancreas.

Miscellany.

Discussion of Appendicitis—A Correction.—Dr. Miles F. Porter calls attention to the fact that remarks were erroneously credited to him in the discussion on the paper of Dr. Gibbons in The Journal, August 29, page 546. The sentences that are credited to Dr. Porter were made by Dr. Ochsner in reply to Dr. Porter's question.

Tongue Reaction to Mercury in Latent Syphilis.—Baroch adds his testimony to that of Herxheimer and Krause in regard to the diagnostic value of the reaction that follows the first dose of mercury, if it is a large one. The two latter observed a reaction in the cutaneous lesions, but Baroch has noticed it on the tongue. The reaction is apparent in fifteen to twenty hours and disappears after twenty-four to forty-eight. It is sometimes accompanied by a temperature reaction. In five cases he found the opaline patches on the tongue, the reaction to the mercury, in less than twenty hours after inunction of about 10 gm. of gray ointment.—*Allg. Med. Ct.-Ztg.*, lxxii, p. 133.

State Boards of Registration.

Oregon Report.—Dr. Byron E. Miller, secretary of the Board of Medical Examiners of the State of Oregon, reports the examination held at Portland, July 7 to 9, 1903, as follows: Number of subjects examined in, 15; total questions, 100; percentage required to pass, 75 per cent.; written examination; total number examined, 24; passed, 20; failed, 4.

PASSED.

Schl. of Pract.	College.	Year Grad.	Per Cent.
H.	Boston University School of Medicine	1903	84.66
H.	Boston University School of Medicine	1903	86.30
R.	University Medical College, New York	1898	83.33
R.	University of Michigan	1898	82.53
R.	University of Iowa	1897	78.40
R.	Cooper Medical College, San Francisco	1903	87.06
R.	College of Phys. and Surgs., San Francisco	1903	84.13
R.	College of Phys. and Surgeons, Chicago	1903	79.60
R.	College of Phys. and Surgeons, Chicago	1903	83.92
R.	College of Phys. and Surgeons, Baltimore	1895	80.13
R.	Rush Medical College	1897	77.53
R.	Rush Medical College	1901	83.86
R.	Rush Medical College	1902	84.20
R.	Rush Medical College	1902	84.86
R.	Rush Medical College	1897	78.60
R.	Jefferson Medical College	1878	79.06
R.	Louisville Medical College	1876	75
R.	Louisville Medical College	1903	84.13
R.	Grand Rapids Medical College	1902	75
R.	Kansas Medical College, Topeka	1892	82.93

FAILED.

Schl. of Pract.	College.	Year Grad.	Per Cent.
H.	Pulte Medical College	1886	73.33
R.	Omaha Medical College	1882	69.66
R.	Vanderbilt University, Nashville	1880	67.06
R.	Undergraduate	....	68.53

Queries and Minor Notes.

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

THE CAUSE OF CANCER.

Cathlamet, Wash., Aug. 17, 1903.

To the Editor:—Has the parasitic theory as to the origin of cancer been fully established? Has Roswell Park, or any other investigator, clearly demonstrated that any one parasite is constantly present? What are the latest ideas of our best pathologists on this subject? Kindly answer through The Journal.

C. W. B.

Ans.—The parasitic theory has not been established. No one has demonstrated the constant presence in cancer of undoubted parasites, and no one parasite has been shown to be associated always with any special form of cancer. The "best pathologists," we believe, are skeptical as to the correctness of the claims put forward now and again by the advocates of the parasitic theory. The problem is unsolved, and we must be content for the present to regard the cause of cancer as wholly unknown.

Association News.

List of new members for the month of August, 1903.

ALABAMA.

Goldthwaite, Henry, Mobile.
Grace, Frank G., Hillman.
McKinnon, C. B., Geneva.

CALIFORNIA.

Witherbee, Orville O., Los Angeles.
Keenan, Alex S., San Francisco.
Beattie, D. A., Santa Clara.
Tyler, John A., Anaheim.
Maher, Thos. D., San Francisco.
Wilde, Kate, Los Angeles.
Johnston, Herbert A., Anaheim.
Fernandez, M. L., San Francisco.
Lilley, John Francis, Oakland.
McNary, W. T., San Jose.

COLORADO.

Reynolds, M. P., Colorado Springs.
McGraw, Henry R., Denver.

GEORGIA.

Fowler, A. L., Atlanta.

IDAHO.

Avery, Oliver H., Payette.
Kleinman, Erwin W., Shoshone.

ILLINOIS.

Colbert, John W., Jacksonville.
Goldstine, Mark, Chicago.
Bates, A. D., Camp Point.
McKee, Edw. N., Roseville.
Phillips, Henry A., Chicago.
O'Neill, A. A., Chicago.
Parker, Howard, Edgar.
Arp, August H., Moline.
Zimmermann, Ernest, Quincy.
Anderson, Margaret, Quincy.
Zeltner, S. L., Chicago.
Weichelt, A., Barrington.
Sachs, T. B., Chicago.

INDIANA.

Bowers, Whitefield, Michigan City.
Long, H. H., Kingsbury.
Smadel, Joseph W., Vincennes.
Thixton, E. D., Sullivan.
Hunter, John R., Huntington.
Briggs, C. F., Sullivan.
Ledbetter, J. N., Michigan City.
Mountain, Jos. R., Connersville.
Stockhardt, Philip E., Elwood.

IOWA.

Dahms, Oscar A., Davenport.
Weber, J. Siewert, Davenport.
Doern, W. G., Fort Madison.
McKinney, O. B., George.
Huff, John W., Onawa.

KANSAS.

Crumbine, S. J., Dodge City.
Esterly, Daniel E., Topeka.

KENTUCKY.

Arnold, J. H., Versailles.
Landman, Louis H., Covington.
Meredith, W. E., Scottsville.
Rodman, J. J., Owensboro.
Eager, B. F., Hopkinsville.
El Kourie, H. A., Clifty.

LOUISIANA.

Bechet, Paul E., New Orleans.
Godfrey, J. B., Olla.

MAINE.

Pennell, Walter J., Auburn.
Davis, Philip W., Portland.
Johnson, Wellington, Augusta.
Hart, Willis F., Camden.
Alden, Eben, Rockland.
Little, Albion H., Portland.
Mitchell, Jr., Alfred, Portland.

MASSACHUSETTS.

Cross, Wm. P., South Boston.
Prescott, W. H., Boston.
Easton, Elwood T., Boston.

MICHIGAN.

Harkness, R. Bruce, Houghton.
Lamley, George H., Riga.
Elliott, William, Escanaba.
Campbell, Samuel E., Winona.
Bell, John N., Detroit.
Turner, J. G., Houghton.
Moore, Joseph J., Farmington.
Farnsworth, Harry B., Detroit.
Jackson, William S., Houghton.
Kirby, T. W., Sault Ste. Marie.
Banks, Harold W., Escanaba.
Laing, A. L., Rapid River.
Wheeler, Aaron R., St. Louis.
Bower, H. L., Greenville.
Burley, Jacob H., Almont.
Rice, William G., Topinabee.
Tucker, A. R., Mohawk.
Laing, John B., Otisville.
Wright, George, Detroit.
LeRoy, Simeon, Grand Rapids.
McColgan, James, Grass Lake.
Harrison, Hugh, Detroit.
Castell, Daniel G., Holly.
Cooper, Wilfred Leslie, Detroit.
Bessey, W. E., Grand Rapids.
Wheeler, Chas. Salter, Flushing.
Bailey, John R., Mackinac Island.
Ferguson, Robert Y., Pontiac.

MINNESOTA.

Coulter, Charles F., Wadena.

MISSISSIPPI.

Banks, Wade S., Abbeyville.
Baker, D. E., Newtonville.

MISSOURI.

Nifong, Frank G., St. Louis.
Dove, J. D. F., Camden.

NEBRASKA.

McLeod, J. W., Lincoln.
Parry, Warren, Fairbury.
Johnson, William H., Wahoo.
Haggard, J. R., Lincoln.
Herron, William F., Pender.
Hawes, Samuel E., Fairbury.
Petty, Chas. O., Beaver Crossing.

Holyoke, R. A., Lincoln.
Sapp, Clinton E., South Omaha.
Smith, Nina R., Pender.

NEW JERSEY.

Nash, A. B., Frenchtown.
Strasser, August A., Arlington.

NEW YORK.

Chapin, Alva L., Niagara Falls.
Lomax, Howard E., Albany.
Young, F. R., Lake Placid.
Gillette, Herbert F., Cuba.

NORTH CAROLINA.

Wilkins, Samuel A., Dallas.
Highsmith, Seavy, Hope Mills.

OHIO.

Alfred, C. M., Lancaster.
Kistler, Geo. B., Newcomerstown.
Marting, William F., Ironton.
Chase, William S., Akron.

OKLAHOMA TERRITORY.

McIlvain, Jas. R., Oklahoma City.
Moorman, Lewis J., Jet.

OREGON.

King, Alfred, Portland.

PENNSYLVANIA.

Dickson, Joseph Z., Pittsburg.
Huyette, M. Luther, Shillington.
Brown, J. C., Smethport.

SOUTH DAKOTA.

Steuart, Charles E., Wessington Springs.

TENNESSEE.

Litterer, Jr., William, Nashville.
Grigg, S. C., Murfreesboro.
McGehee, John L., Memphis.
Hughes, M. L., Clarksville.
Penn, George W., Humboldt.
Baldwin, W. H., Memphis.
Culbreath, L. W., Stanton.

TEXAS.

Fenley, W. M., Menardville.
Randall, Edward, Galveston.
Moore, James A., Marshall.
Harlan, William Jay, Bartlett.

VERMONT.

Wiltse, M. J., Burlington.

VIRGINIA.

Carr, George H., Portsmouth.
Hodges, J. Allison, Richmond.

WISCONSIN.

Watson, Fred V., Antigo.
Baker, George R., Tomahawk.
Henbest, G. M., Madison.
Chambers, Harry P., Florence.
Nadean, A. T., Marinette.

PHILIPPINE ISLANDS.

Warwick, C. A., Manila.

REPORT ON THE SCIENTIFIC EXHIBIT

Of the American Medical Association, at New Orleans, May 5-8, 1903.

By Frank B. Wynn, A.M., M.D., Chairman.

(*Concluded from page 623.*)

MEDICAL DEPARTMENT, UNIVERSITY OF INDIANAPOLIS: FRANK B. WYNN AND JOHN S. WRIGHT.

Research Group.

No. 318. Banana Shreds of Fibrovascular Tissue, passed in stool and supposed to be parasites. This was reported to the Indianapolis Medical Society in 1901 by F. B. Wynn, and is the third such submitted to him for identification.

No. 319. Segments of Cabbage, probably served as slaw, passed in the stool, and supposed to be tapeworm. The resemblance to segments of the tapeworm was striking, but the microscope easily revealed the vegetable nature of the product.

No. 320. Ribbons and Shreds of Paper Passed in Stool.—Some portions resembling the segments of tapeworm; others were like the mucous casts occurring in mucous colitis. The woody fiber of many papers makes them very indigestible. They may be so intimately adherent to such things as meat, caramel candy, etc., as to escape notice, and in the stool might easily give rise to error in diagnosis.

No. 321. Fusiform Masses of Parenchyma Cells of the Lemon, passed in the stool and mistaken for parasites. The resemblance to the fluke is striking.

The foregoing specimens led to an experimental study by ten students of the university designed to show the following:

(*a*) The histology of common fruits and vegetables used as articles of diet, including apple, peach, pineapple, pear, banana, gooseberry, currant, rhubarb, grape, tomato, string bean, navy bean, onion, sugar corn, pop corn, celery, Irish and sweet potato, peanut, cabbage, kale and cucumber.

(*b*) Effect of the ordinary methods of preparing food for table use in causing disintegration. In an assigned article the student made fresh mounts from the food as found on the table at the restaurant.

(*c*) Effect of digestive processes on these foodstuffs and the recognition of partially altered food remnants which might be mistaken for parasites. Each student ate freely of an assigned article at different times, afterward searching the stools for remanants of the food taken.

These studies demonstrated very clearly that the fibrovascular tissue, especially of pineapple, rhubarb and celery, often resists the action both of cooking and the digestive juices, appearing as slender white threads in the stools, which might easily be mistaken for worms.

Nos. 322-376. Drawings and Gross Specimens Illustrative of the Foregoing.

Miscellaneous Group.

Nos. 377-382. Pulmonary Tuberculosis, Different Types.

Nos. 383-388. Liver Series.

Nos. 389-394. Kidney Series.

Nos. 395-405. Embryologic Series.

Nos. 406-411. Miscellaneous Specimens.

These were all Kaiserling preparations mounted in glycerin jelly by students of the university. The mounting was unique and artistic. The containers were Petri dishes set in heavy oak boards, which are convenient for class demonstration, non-breakable and may be stacked in drawers away from the light—a factor of importance in preserving the colors.

RUSH MEDICAL COLLEGE: E. R. LE COUNT.

Experimental Group.

Nos. 412-415. Series of Preparations Illustrating Experimental Fat Necrosis, as obtained by injecting either commercial pancreatins or extracts of fresh hog pancreas into the abdominal cavity of dogs and cats. The specimens showed the results respectively twenty-five hours, forty-eight hours, five days and nine days after injection. (See article by Wells, *Journal Medical Research,* 1903, iv, 70.)

No. 416. Gangrenous Pancreatitis with Disseminated Fat Necrosis.—This specimen was shown for purposes of comparison with the experimental lesions. The foci of fat necrosis were visible over the mesentery and omentum. At the necropsy the head of the pancreas was found to be of normal firmness, with distinct lobular markings on the cut surface and gray with reddish mottling foci. Necrosis of the entire body of the pancreas had taken place.

No. 417. Subacute Hemorrhagic Pancreatitis, with Fat Necrosis.—Specimen from a man who died of lobar pneumonia. Dark red areas, irregular in outline, were seen externally in the fresh specimen; also yellow areas. Histologic examination showed an acute inflammation in addition to extensive necrosis and hemorrhage.

Group of Heart Specimens.

Nos. 418-423. Series of Cardiac Anomalies.—These included asymmetrical pulmonary segments; fenestrated foramen ovale; perforate ventricular septum, and a rare congenital mal-development in which there was communication between the aorta and left ventricle under the base of the anterior aortic valve. Hektoen could find no mention of a similar case in literature.

Nos. 424-435. Series of Endocardial Heart Lesions.—Three of these were of acute aortic endocarditis; three of acute mitral or parietal endocarditis, and six were chronic valvular deformities resulting from fibrosis or calcareous infiltration, causing stenosis or insufficiency.

Group of Miscellaneous Specimens.

No. 436. Skeleton of a Short-Limbed Dwarf.—From a man 45 years of age. There was a fibroid thyroid, containing no demonstrable thyroidin(?). The cranial vault possesses 172 wormian bones. The skeleton has some features of osteogenesis imperfecta and some of chondrodystrophia fetalis. The absence of a clinical record and the disuse incident to deformity, with resulting alterations of the bones, are factors which make classification difficult.

No. 437. Acute Yellow Atrophy.—The hepatic tissue illustrating this rare disease was from a woman 35 years of age. She had jaundice in August, and when admitted to the hospital the following November the icterus was very deep and she had been semistuperous for several days. Death occurred twenty-four hours after admission. Only partial examination was permitted. In the specimen large reddish areas were noted which contained very little liver tissue; greenish districts still showed some lobular markings.

Nos. 438-439. Rupture of Spleen.—In one of these, by the passing of a wagon wheel over the body, the organ was torn in two pieces. Operation in six hours was followed in a month by complete recovery. The other was a crushing injury from an elevator. Operation in eight hours, with complete recovery. In one there was subsequent glandular enlargement.

Nos. 440-452. Miscellaneous Gross Specimens.

The instructiveness of this fine collection was greatly enhanced by very complete accompanying data—clinical and pathologic—plainly written on white paper.

JOHNS HOPKINS UNIVERSITY: HARRY T. MARSHALL AND T. S. CULLEN.

Internal Medicine Group.

These were designed to illuminate more particularly amebic dysentery, a topic prominently considered in the Section on Practice of Medicine.

Nos. 453-456. Amebic Dysentery.—These specimens showed very typically the intestinal lesions.

Nos. 457-460. Amebic Liver Abscess.

Nos. 461-464. Intestinal Lesions of Typhoid.

Nos. 465-468. Tuberculous Ulcers of the Intestine.—The typhoid and tuberculous lesions of the intestines were exhibited for purposes of differentiation from dysenteric lesions.

Gynecologic Group.

These were limited to uterine myomata and represented the cullings of material obtained at the Johns Hopkins Hospital. The specimens and drawings were used in illuminating a paper read by T. S. Cullen before the Section on Obstetrics and Diseases of Women.

No. 469. Myoma Showing Sarcomatous Nodules in Middle.

No. 470. Specimen Showing Transition of Myomatous Fibers into Sarcoma.

No. 471. Diffuse Adenomyoma, occupying inner layers of uterus and forming a complete zone around the uterine cavity. Histologic examination showed that the gland elements were derived entirely from the mucosa.

No. 472. Early Adenocarcinoma of Body Associated with Myoma.—The growth was so recent that the mucosa was not in the least thickened.

Nos. 473-478. Cervical and Submucous Myomata.

Nos. 479-496. Myomata Showing Various Degenrative Changes.

Nos. 497-568. Drawings Made from Sections of the Foregoing Tumors.

These two very complete groups of specimens were contributed in conformity with the wishes of the committee, aiming thus to illuminate subjects of prominence considered on the section programs.

MEDICAL DEPARTMENT, WASHINGTON UNIVERSITY: WILLARD BARTLETT.

Experimental Group.

Nos. 569-577. Experimental Intestinal Anastomosis.—These specimens were obtained from dogs, and are used for teaching purposes in the university. They were beautifully prepared and showed well the following:

(*a*) End-to-end anastomosis, Connell suture, 30 hours. Illustrating too long a diaphragm.

(*b*) End-to-end anastomosis, Halstead peritoneal suture, 5 days. Too long a diaphragm.

(*c*) End-to-end anastomosis, Connell suture, 16 days. Illustrating the small diaphragm which should be present at this time.

(*d*) End-to-end anastomosis, Connell suture, 40 days. Almost complete disappearance of diaphragm, and re-establishment of normal lumen.

(*e*) Lateral anastomosis, Halstead peritoneal suture, 21 days. Showing the growing together of new opening.

(*f*) Lateral anastomosis, Halstead peritoneal suture, four Connell through-and-through sutures added 21 days. Opening prevented from growing together by last-named sutures.

(*g*) Lateral anastomosis, Halstead peritoneal sutures, 28 days. Showing new opening more grown together than in (*e*).

(*h*) Lateral anastomosis, two rows of continuous Lembert sutures, one through peritoneum and other through all coats of bowel, 49 days.

(*i*) Lateral anastomosis, Halstead peritoneal suture, 87 days. Illustrating a new opening so grown together that there is distension of the proximal loop in consequence.

Miscellaneous Group.

Nos. 579-585. Miscellaneous Gross Specimens.

ST. LOUIS UNIVERSITY: WILLARD BARTLETT.

Nos. 578-585. Miscellaneous Gross Specimens.

These were all prepared by the Kaiserling method and illustrated various pathologic points well. Metastatic sarcoma was beautifully shown in the lung, liver, kidney and spleen.

COLLEGE OF PHYSICIANS AND SURGEONS, CHICAGO: W. T. ECKLEY.

Nos. 596 621. Anatomic Specimens.
Nos. 622-633. Gross Pathologic Specimens.

The first set was beautifully prepared, semi-moist specimens used by the exhibitor in teaching in the college. Accompanying these was a batch of theses by students, containing a large number of original drawings, testifying forcefully to the excellent work done in the institution in this department. This is the third successive year in which this institution has contributed ably toward the Scientific Exhibit of the Association.

ST. PETER STATE HOSPITAL, MINNESOTA: H. D. VALIN.

Nos. 634-648. Casts of Pathologic Brains.—Illustrating the following pathologic conditions: Porencephaly, glioma, amniotic adhesion band, destruction of cortex, localized internal hydrocephalus and hematoma duræ. (Made in the laboratories of the institution.)

Nos. 649-658. Surface Anomalies of Convolutions and Sulci.

Nos. 659-664. Anatomic Casts of Brain and Cord.

Nos. 665-779. Album of Photomicrographs.—The first sixteen were of the brain cortex of the cat and rat, showing, by way of comparison, sections before and after the various stages of fatigue. The remainder were of various pathologic conditions of the central nervous system, including acute delirium; first, second and last stages of degeneration in cells; capillary hemorrhages into the brain cortex; asphyxia in epilepsy; multiple embolism (luetic); hemiatrophy and hemisoftening, diseased and healthy sides; atrophy of auditory cortical center compared with opposite side; senile and mania-dementia, with degeneration of cortex; sclerosis of comma tract in general paresis; tumor of pituitary; glioma; tumor of spinal cord, and many others.

Nos. 780-815. Lantern Slides of the Foregoing.

The photomicrographs were artistic in showing the utmost detail of histologic structure and were made doubly interesting by the very complete and methodical, clinical and pathologic data which accompanied them.

COOK COUNTY HOSPITAL, CHICAGO: F. G. HARRIS.

The following collection consisted of choice Kaiserling preparations. Some were of unusual pathologic as well as clinical interest. It is creditable to the institution to have made such a contribution.

No. 816. Ileum Showing Attached Hookworms.—These specimens of *Uncinaria americana* were from a man aged 52 years who had lived in Panama for twenty-five years. For a year and a half previous to death he suffered from severe progressive anemia. The eggs and larvæ were found in the stools. Blood examination gave the following: Reds, 846,000; whites, 4,500; hemoglobin, 12 per cent.; eosinophiles, 13 per cent.; no nucleated reds. (Reported by Copps, The Journal A. M. A., January, 1903.)

No. 817. Charcot Knee Joint.—The specimen showed beautifully the destruction of the ligaments, cartilages and synovial membranes; also the erosion of the bones and periarticular fibrosis. The patient was a man who contracted syphilis fifteen years previously. For two years he noted a progressive and painless enlargement of the joint. Excessive mobility interfered with locomotion. Other symptoms and signs of tabes dorsalis present.

No. 818. Puerperal Endometritis-Infection with Bacillus Aerogenes Capsulatus.—Specimen obtained from a woman 24 years of age, confined three days before death. Gas containing cavities were to be seen throughout the uterus.

No. 819. Myeloma of Femur.—Circumference of knee, 28 inches. Tumor transparent to *x*-rays. The patient, a woman of 30, received an injury to the knee seven years ago. Six months later progressive enlargement of the knee began and was accompanied by some pain and limitation of motion. No metastases.

No. 820. Congenital Cystic Kidney.
No. 821. Bilateral Cystic Kidneys.
No. 822. Unresolved Pneumonia.
No. 823. Aneurism of Thoracic Aorta.
No. 824. Aneurism of Abdominal Aorta.
No. 825. False Aneurism of Abdominal Aorta.
No. 826. Serofibrinous Pericarditis.
No. 827. Adhesive Pericarditis.
No. 828. Atrophic Cirrhosis of Liver.
No. 829. Metastatic Carcinoma Lungs.
No. 830. Metastatic Carcinoma Liver.
No. 831. Splenic Cyst.
No. 832. Interstitial Carcinoma Stomach.

The following series of specimens was entirely in illustration of the gross lesions of malaria.

U. S. ARMY MEDICAL MUSEUM, WASHINGTON, D. C.: COL. CALVIN DE WITT.

No. 833. Spleen and Kidney in Chronic Malarial Poisoning.

No. 834. Darkly Congested Kidney, Pernicious Malarial Fever.—Estivo-autumnal parasite found in spleen. H. E. N., aged 23, white. Admitted March 2, 1900, to Post Hospital, Cebu, Philippine Islands; April 15 was outdoors and exposed to sun; fainted, and blood appeared in urine and feces. On the 18th and 19th there was much restlessness and prostration; unconsciousness; intense yellowishness of skin and conjunctiva; persistent vomiting; involuntary urination and defecation; heart action weak; constantly under strychnia stimulation. Repeated peripheral examination of blood failed to show malarial parasite. Urine blackish and contained vast numbers of partly disintegrated blood corpuscles and blood casts; little albumin; no epithelium or casts; color much improved during last twenty hours of life. Died 19th. Necropsy three hours after death. Lungs apparently normal; liver a muddy color; gall bladder contained a thick, tarry bile; small intestine much stained with bile and contained twelve lumbricoid worms; kidneys darkly congested; spleen much enlarged, dark and congested; scrapings from latter showed microscopically the estivo-autumnal parasites, containing large pigment granules in active motion.

Nos. 835-836. Spleen and Kidney in Pernicious Malarial Fever.—From the Philippines.

No. 837. Spleen in Chronic Malaria.—From the Philippines.

This special series was solicited by the Committee. It makes the second time that the Army Medical Museum has contributed liberally, under the direction of Col. DeWitt, to the Scientific Exhibit of the Association.

The Indiana State Medical Association was the first organization to institute the scientific exhibit as a feature of society work, and to its efforts may be attributed the introduction of the exhibit into the American Medical Association. The collection was entirely of dry specimens.

INDIANA STATE MEDICAL ASSOCIATION: FRANK B. WYNN.

No. 838. Skull Trephined by Baron Larrey, surgeon of Napoleon I. During the retreat from Moscow in 1812 the man was cut down by a Russian cossack and left on the field twenty-four hours. He recovered after trephining. and continued in the service a year. Died in 1873. Just above the squamous portion of the temporal is a quarter-sized opening in the calvarium, where the button was removed, and extending two inches from it the evidence of a saber cut. He suffered slight difficulty in speech. (Fletcher.)

No. 839. Enormous Distension of Colon from Retained Feces.—This specimen was obtained by Drs. Gleb and Jones, Groton, S. D., from G. K., who went for one year and three days without a bowel movement. For the first six months he ate three hearty meals a day, doing harvest work. Later he could only do light work. At some points the bowels measured 19¼ inches.

Nos. 840-879. Collection of Vesical Calculi.—This fine series of stones was obtained by operations, during a residence of eleven years in Persia, by J. G. Wishard. Some of the cases were operated on under the most trying circumstances, in filthy and crowded quarters, and in some instances in stables.

No. 880. Ten Renal Calculi.—Product of one nephrectomy; weighing 5 ounces. The patient was a man, 39 years of age. Several years previously he had been injured by the caving in of a pit. Had hematuria for a week, but no further renal symptoms. For a year and a half previous to the operation by F. R. Charlton he had been treated for stomach trouble, persistent vomiting being the most conspicuous symptom. At the time of operation there was tenderness over the back and pus in the urine. Nephrotomy was first performed, a pint and a half of pus and the stones were removed; ten days later the kidney was removed. Recovery.

No. 881. Epidermal Cast of Foot.—Hemorrhagic smallpox. (Brayton.)

Nos. 882 902. Miscellaneous Specimens.—Including enteroliths, hair balls, foreign bodies removed from the larynx by operation, etc.

GEORGE E. SHAMBAUGH, CHICAGO (PRIVATE COLLECTION).

Nos. 903-906 Series of Wood's Metal Casts of Ear.—1. Two casts of labyrinth mounted on stiff cardboard, with drawings of anterior and posterior surfaces. 2. Metal cast of ear showing: (*a*) Meatus auditorius externus; (*b*) cellulæ mastoidæ; (*c*) meatus acousticus internus; (*d*) the osseus labyrinth. 3. Cast same as No. 2 and showing, in addition, the aquaductus vestibuli and the canaliculus cochleæ, with its accessory canal for the exit of the large vein from the cochlea.

Nos. 907-918. Series of Celloiding Casts of Labyrinth, mounted in cells and made from a preparation in which the blood vessels had been previously injected. 1. Complete cast of labyrinth, showing a perfect injection of the capillaries as well as the arteries and veins. Two drawings of the preparation in colors. 2. Cast of the cochlea, showing the arterial tree alone. Drawing of same in colors. 3. Drawings in colors to show following: (*a*) Basal coil of cochlea of embroyos 11 cm. long; (*b*) venous tree of cochlea; (*c*) basal coil of cochlea of fetus, full term; (*d*) cross section of cochlea; (*e*) detail of piece from basal coil of cochlea; (*f*) semicircular canal with ampulla; (*g*) detail drawing of section of the semicircular canal.

R. W. GILLMAN, DETROIT (PRIVATE COLLECTION).

Nos. 919-937. Series of Temporal Bones.—Arranged in order to show the varying distance of the lateral sinus from the spina sup. meatus. In No. 1 the distance was 21.0 mm. In each succeeding specimen the sinus was shown nearer the meatus, and in No. 17 they were only 6.0 mm. apart.

EDWARD EVANS, LA CROSSE, WIS. (PRIVATE COLLECTION).

Nos. 936-947. Products of Twelve Cholecystotomies.
Nos. 948-953. Appendiceal Specimens.

The stones in each cholecystotomy case were beautifully mounted on a board. The essential points of interest to the appendiceal specimens were the foreign bodies found in the appendix. In one case there was an apple seed; in another two live round worms were found in an abscess surrounding the perforated appendix.

The following exhibit was a beautiful series of casts of the bladder and prostate gland, designed to show the different types of hypertrophy of the latter, with the view of illustrating the particular form of surgical treatment indicated in each case.

BRANSFORD LEWIS, ST. LOUIS (PRIVATE COLLECTION).

No. 954. Bilateral Enlargement, with obstruction from pedunculated intravesical growth. Suprapubic operation advisable.

No. 955. Moderate Enlargement of Lateral Lobes; thick prostatic bar; deep bas fond; marked curvature of urethra. Favorable for perineal prostatectomy.

No. 956. Enlargement of Both Lateral Lobes; pedunculated median intravesical tumor from posterior commissure. Suitable for suprapubic removal.

No. 957. Pedunculated Median Intravesical Growth from posterior commissure. Favorable for suprapubic removal.

No. 958. Excessive Enlargement of Lateral and Median Lobes; direct pressure on both ureter openings producing dilatation of ureters and renal pelves. Favorable for combined suprapubic and perineal removal.

No. 959. Lateral Lobes, Enlarged; especially right; high prostatic bar, with small nodule on right; deep bas fond. Favorable for Bottini or perineal prostatectomy.

No. 960. Marked Enlargement of Both Lateral Lobes, and globular intravesical tumor from posterior commissure. Removal of tumor and both lobes required: best accomplished through perineal and possibly suprapubic combined routes. Bottini inappropriate.

No. 961. Moderate Enlargement of Lateral Lobes.—Pyramidal median projection capable of ball and socket effect. Suitable for suprapubic removal.

No. 962. Multiple Adenomata projecting into prostatic urethra. Favorable for perineal removal. Bottini inappropriate and inadequate.

HERMAN TUHOLSKE, ST. LOUIS (PRIVATE COLLECTION).

No. 963. Placenta Attached to Liver.

This remarkable specimen is the only one of its kind reported. The nearly full term fetus was removed from the abdomen by operation, but the woman died a few hours later from secondary hemorrhage.

H. F. HARRIS, ATLANTA (PRIVATE COLLECTION).

Nos. 964-966. Malarial Plasmodium.—Preparations stained by the modified Romanowsky process.

No. 967. Ameba from case of amebic dysentery in man.

No. 968. Ameba from a case of dysentery experimentally induced in a dog.

CLAUDE A. SMITH, ATLANTA, GA. (PRIVATE COLLECTION).

No. 969. Gross Specimens of Uncinaria americana.

Nos. 970-972. Microscopic Mounts, showing both the hookworm and ova.

MIHRAN K. KASSABIAN, PHILADELPHIA (PRIVATE COLLECTION).

Nos. 973-1012. Collection of Skiagraphs.

These skiagraphs were excellent. The more noteworthy among them were: (*a*) Pleurisy with effusion. (*b*) Vesical calculus. (*c*) Congenital dislocation of both hips (reduced by Lorenz).

W. C. FUCHS, CHICAGO (PRIVATE COLLECTION).

Nos. 1013-1113. Radiographs.—Rare in this collection were the following: (*a*) Four-month fetus differentiated from tumor; (*b*) pus sac-recurrent appendicitis; (*c*) floating kidney; (*d*) pericarditis; (*e*) gallstones; (*f*) cyst of the brain.

Medical Organization.

MEDICAL ORGANIZATION METHODS AND BENEFITS.

J. N. M'CORMACK.

(Continued from page 623.)

THE REMEDY.

Through the universal county society system it is proposed that there should be built up in each community, gradually and with the self-sacrificing labor incident to all important undertakings, a permanent organization, which will give artificially, as it were, the same opportunity for acquaintance, comradeship and improvement which comes naturally in those more favored vocations, of which the legal profession is a conspicuous example. To do this will require a union of all the forces at the command of the profession—its leaders, existing societies and schools. To secure this union, physicians must be convinced and students taught that no one was ever permanently benefited by traducing his competitors, or by the practice of any of the "black arts," and that the time has come for them to decide whether they will go on in the old, discredited courses, "learning nothing and forgetting nothing," as Macauley said of the Stuarts, wasting valuable time and bringing continued reproach on themselves and their guild, in endless, senseless, profitless bickerings, as in the past, or, instructed by what is going on around them in other callings, and in other sections in their own calling, get together for their own and the public good. There will be dissenters and pessimists, and the work may be difficult at the outset in many places, but each county accomplishing it and conducting its society in the broad, kind and mutually helpful spirit to be inculcated, will be an object lesson for its neighbors, good examples being just as infectious as bad ones. In such counties it will be an honor to be a physician, a pleasure to practice medicine, and the public will be benefited even more than the profession.

OTHER OBJECTS.

It must be borne in mind always that the organization and resulting pleasant relations indicated, important and essential as they are, are only means to far higher and more useful ends. Assuming that all this has been accomplished, or is well under way, the real work of the society should then be undertaken. To do this to the fullest advantage, study should be given to the many ways in which it may be made useful to the profession and people within its jurisdiction. Most of these are indicated in the by-laws briefly, but may require elaboration. In a measure, and in a very modest way at first, each society should be made a post-graduate school for the county. All who can do so should be urged to attend such schools in the medical centers from time to time for the purpose of getting out new editions of themselves, as it were, and to impart the information thus acquired, so far as possible, to their less fortunate colleagues who can not do so. Programs should include not only the usual papers and discussions, but also demonstrations, clinical cases, pathologic specimens, exhibits of the latest and best journals and books, and occasionally an address by some prominent invited guest. Younger members who can qualify themselves to do so should be encouraged to take up special research work. All of the proceedings should be so shaped and conducted as to encourage home study, both in the review of the elementary branches and as to the application of the latest and best methods in practice. A line of study after the plan of some of the university extension courses is greatly needed for the use of county societies and is likely to be developed soon. Public health questions should also have frequent place on the program. Aside from the prevention or restriction of epidemic and the ordinary communicable diseases, the complex problems incident to our rapidly-increasing population in this country, both rural and urban, must be met and worked out by the medical profession. Our rivers, which must be the source of water supply for future generations, are rapidly being converted into open sewers, poisoned, as are the soil and air, from ignorance more than greed on the part of municipalities, corporations and individuals. An educated public sentiment, which must originate and be directed by the medical profession, is needed, to demand and enforce preventive and remedial legislation in regard to these and other public dangers, unless we are to repeat the unfortunate experience of the older civilizations, whose people were repeatedly decimated and finally dwarfed as results of such neglect. The society should always be in touch with the county and municipal boards of health of its jurisdiction, and should lead in and co-operate with every proper effort to improve sanitary conditions. With these ends in view it should have a voice or be consulted in regard to new regulations and ordinances, and in the selection of the members of such boards.

MATERIAL AND BUSINESS INTERESTS.

Physicians are proverbially poor business men. As has been shown, this has resulted largely from the failure of even the best medical schools to give any instruction on the subject to start with, supplemented by an almost universal lack of organization, and false ideas as to a conflict of interest between local men. There has been a singular delicacy of sentiment, too, about the propriety of discussing this subject either in medical societies or before the public. All this must be changed. The time has come for everybody to understand that under modern conditions a physician who is a failure financially can not keep himself qualified and equipped for safe practice, and that in consequence low prices and rate-cutting are fruitful sources of danger to the public. Some voluntary understanding as to charges in each community is proper and necessary, but in order to prevent a possible abuse of the great power which a universal organization of the profession will give it is wisely written into the fundamental law of the entire system that no schedule of fees or agreement as to prices shall be adopted by any society. A medical trust would be objectionable and un-American as any other kind of trust. Beside, experience has shown that even the best-intentioned attempts to enforce such agreements by expulsion or other penalties have always resulted in further dissensions, with public sentiment and advantage on the side of the less scrupulous. Moral suasion, backed by an organized profession and an educated public sentiment, is the only remedy here as in all similar matters. For these reasons the by-laws also provide that "each county society shall set apart at least one meeting in each year for a discussion of the business interests of the profession of the county," and for efforts for a proper instruction of the public on the subject. At this meeting some leading members who have been most successful along just and ethical lines should open the discussion, which should be so directed as to indicate the best and most practical methods for the guidance of all. It should include the frequency and best methods of making collections; the expediency of a common collector for a number of physicians, on a salary and with a separate office, who can devote his entire time to their service; of the advantages of an office at the residence, or the economy of a joint office with different hours, or a common waiting room with individual consulting rooms, with the same office attendant and telephone; of a hospital owned or directed in whole or in part by the profession; of the advisability of taking advantage of modern pharmaceutic conveniences and dispensing their own drugs, and all similar questions, so far as they are adapted to the conditions and needs of that society.

In all of these matters the interests of the public should be fully and fairly considered, and at such meetings leading laymen might often be invited to take part in the discussions with profit to all. In fact, the mutual interests and obligations of the profession and public in everything should be iterated and reiterated as a means of education for both. The best and highest sources of information are now open and reasonably accessible to all medical men in this country, and every community is entitled to, and should have, competent physicians, and the best and most approved treatment in their afflictions. Most people who are in moderate circumstances, and all in emergency sickness, must receive this at the hands of their home physicians or not at all. Through systematic organization alone is it possible to furnish the incentives and opportunities requisite for such ends, and organization is incomplete until this has been done. This instruction, whether at home or in medical centers, with the incident equipment essential to its utilization in practice, is expensive and the public should be educated to its interest and duty in such a support of the profession as will enable its members to acquire them without depriving their families of the means of subsistence.

SOCIAL PROVISIONS.

The social features of the society should also receive careful attention, probably at the hands of a permanent committee with talent for such matters. Frequent and inexpensive lunches should be recognized as a legitimate and tasteful method of increasing the attendance and interest, and of promoting kind personal relations. In this respect the society should represent a gentlemen's club in its informal but dignified and respectful intercourse. It should be borne in mind by all concerned that members will take the time and trouble to attend only so long as the meetings are made pleasant and instructive. Little fear need be entertained on these points, however, if the councilors, and through them the profession at large, can once be made to understand the character, spirit and advantage of the work, so that each officer and member may be induced to do his full part.

QUALIFICATIONS OF COUNCILORS.

On account of the important powers and duties imposed on the council as a body, and still more on its individual members for several years to come at least, the office of councilor will be the most responsible within the gift of the state associations. Indeed, the inauguration and success of the entire work is so dependent on what he does that no one should accept the office who will not freely give the time and labor necessary to the efficient discharge of the duties. It is necessary that every one who would qualify himself for the office should make a special study of the constitution and by-laws which his state association has adopted, and of those which it has recommended for adoption by county societies. He should make himself familiar with the history of medicine, and especially with that of his own state and country. He should also inform himself as to the medical and health laws of the state. When possible, a joint meeting of the council and state board of medical examiners and the state board of health should be held early in the work in order that there may be that harmony of views and concert of action between those working for common ends essential to the best results. Representatives from the faculties of the various medical schools should be invited to such meetings for consultation as to the feasibility of establishing practical courses on ethics and business methods, as well as of having all advanced students advised as to the advantages of society membership and organization.

DUTIES OF COUNCILORS.

Possessed of the accurate knowledge and breadth of views which will qualify him for a discussion of the necessity, practicability and objects of the reorganization which the profession has undertaken, and being supplied with a card index register, or other reliable list containing the names of the physicians of each county in his district, the councilor is ready for active work. Selecting the county, a personal letter should be written to each physician notifying him of the place and hour agreed on for a meeting to consider the advisability of such an organization of the profession of his county as will improve all of its interests, scientific, social and material. The letter should be explicit, cordial in tone and should conclude by urging him to attend, and to notify and bring his professional neighbors and friends with him. A copy of the county constitution and by-laws should always be enclosed. Unless it is known that all of the physicians at the county seat are on unusually friendly terms the meeting should always be called at the courthouse, a hotel or other public place, and some conveniently located physician should be requested to arrange for the room and see that it is in order.

On his arrival the councilor will do well to call on each physician at the county seat, interest him in the meeting, and have him call up his friends out in the country, remind them of the meeting and urge them to come in. He is likely to meet with much discouragement and to hear many doleful complaints in this part of his work, but it may be encouraging for him to know that the best and most permanent results have often been secured in counties where conflicting interests and personal dissensions at first appeared so long established and irreconcilable that all were reluctant to attend. The importance of a full attendance at the first meeting, especially of those at the county seat, or those between whom dissensions or coolness exist, can hardly be overestimated. Such of these as fail to hear the address, to have an opportunity to take part in the discussion which follows, and to come into fellowship then will usually prove much more difficult to deal with afterward.

(To be continued.)

Crawford County (Ind.) Medical Society.

This society has been organized with Dr. Frederick R. Gobbel, English, president; Dr. Charles D. Luckett, English, vice-president, and Dr. G. H. Abell, secretary and treasurer.

Durham County (N. C.) Medical Society.

Dr. Hubert A. Royster, Raleigh, councilor for the Fifth District, met with the physicians of the county at Durham, August 28, and organized a county medical society in affiliation with the state and National organizations, with an initial membership of 11. Dr. A. G. Carr, Durham, was elected president; Dr. Norman M. Johnson, Durham, vice-president, and Dr. George H. Ross, East Durham, secretary and treasurer.

McLennan County (Texas) Medical Society.

Physicians of McLennan County met at Waco, August 25, and organized a county medical society, adopting the constitution and by-laws recommended by the American Medical Association and electing the following officers: Dr. James C. J. King, Waco, president; Dr. Ralph E. Conger, China Spring, vice-president; Dr. Jesse J. Dean, Waco, secretary; Dr. J. D. Lovelace, Spegleville, treasurer, and Drs. Oliver I. Halbert, Garland B. Foscue and C. Enrique Smith, all of Waco, censors.

South Dakota Fourth District Medical Society.

A large number of physicians met at Huron, August 27, and organized this society, which comprises the counties of Beadle, Buffalo, Hyde, Hand, Hughes, Gerauld, Spink, Sanborn, Stanley and a part of Kingsbury. The following officers were elected: Dr. William H. Lane, Miller, president; Dr. Clark B. Alford, Huron, vice-president; Dr. Charles J. Lavery, Pierre, secretary; Dr. John L. Foxton, Huron, treasurer, and Drs. Lorme W. Robinson, Pierre, Isaac M. Burnside, Highmore, and E. A. Taylor, Huron, censors.

Jasper-Morton County (Texas) Medical Society.

Dr. Benjamin F. Calhoun, Beaumont, councilor for the Tenth (southeast) District, met with the physicians of Jasper and Morton counties at Jasper, August 30, and organized a medical society with the following officers: Dr. H. R. Hancock, president; Dr. Jefferson D. Yates, Kirbyville, vice-president; Dr. Thomas E. Stone, Jasper, secretary and treasurer; Drs. B. F. Yates, Jefferson D. Yates, Kirbyville, and G. T. Sutton, censors; Dr. Thomas E. Stone, Jasper, delegate to the state medical association, and Dr. Benjamin F. Bean, Kirbyville, alternate.

Green Lake County (Wis.) Medical Society.

The physicians of Green Lake County met at Dartford, August 20, organized a county medical society and adopted the constitution recommended by the American Medical Association for county societies. The following officers were elected: President, Dr. Charles E. Thayer, Markesan; vice-president, Dr. Arthur L. Travis, Princeton; secretary and treasurer, Dr. B. E. Scott, Berlin; delegate to state society, Dr. John S. Walbridge, Berlin, and censors, Drs. John S. Walbridge, Berlin, George E. Baldwin, Dartford, and Gertrude C. Crumb, Berlin.

Guilford County (N. C.) Medical Society.

On August 22 a meeting of physicians of the county was held in Greensboro to perfect reorganization in accordance with the constitution of the state society, at which the following officers were elected: Dr. Millard F. Fox, Guilford College, president; Drs. James A. Turner, High Point, and William J. Richardson, Greensboro, vice-presidents; Dr. Thomas R. Little, Greensboro, secretary and treasurer, and Drs. William J. Richardson, Thomas R. Little and Albert R. Wilson, all of Greensboro, committee on constitution and by-laws to report at the September meeting.

Orleans Parish (La.) Medical Society.

This society is in a flourishing condition, as evidenced by the large attendance at the meetings held in the heat of summer and by the very valuable papers contributed recently. The society now has 218 members, the largest number in its history. This gratifying state of affairs is to be attributed to the interest freshly awakened, in the first place, by the meeting of the American Medical Association held in New Orleans last May, and secondly, by the determination of the society to affiliate with the Louisville State Medical Society, as well as by the new regulations of the state society requiring each member to belong to his local society.

Societies.

COMING MEETINGS.

Medical Society of the Missouri Valley, Omaha, Sept. 14-15.
Medical Society of Virginia, Roanoke, Sept. 15-17.
Medical Society of the State of Pennsylvania, York, Sept. 22-24.
American Association of Obstetricians and Gynecologists, Chicago, Sept. 22-24.
Colorado State Medical Society, Denver, Oct. 6 8.
Medical Association of the District of Columbia, Washington, Oct. 6.
Idaho State Medical Society, Boise, Oct. 8-9.
Mississippi Valley Medical Association, Memphis, Tenn., Oct. 7-9.
Vermont State Medical Society, Bellows Falls, Oct. 15-16.
New York State Medical Association, New York City, Oct. 19-22.

Montana State Medical Association.—This association has filed its articles of incorporation, in accord with the resolution passed at the annual meeting in Butte, July 8, authorizing the special committee so to do.

Floyd County (Ga.) Medical Society.—At the first meeting after the organization of this society, held at Rome, August 25, Dr. Robert M. Harbin was elected president; Dr. Levi P. Hammond, vice-president, and Dr. William J. Shaw, secretary, all of Rome.

Boise (Idaho) Medical Association.—The organization of this association was completed, August 17, by the election of the following officers: Dr. George Collister, president; Dr. Warren D. Springer, vice-president; Dr. James L. Stewart, secretary and treasurer, and Drs. Lewis C. Bowers, Lewis, and Ed. E. Maxey, censors.

Pacific Coast Association of Railway Surgeons.—At a meeting in San Francisco, August 24, seventy-five railway surgeons organized this association, with the following officers: President, Dr. Walter B. Coffey, Southern Pacific, San Francisco; vice-presidents, Drs. Norman H. Morrison, Santa Fe, Los Angeles, Charles N. Ellinwood, San Francisco, and Kenneth A. McKenzie, Oregon Railway and Navigation Company, Portland; treasurer, Dr. Frank K. Ainsworth, Southern Pacific, San Francisco, and secretary, Dr. James P. Dunn, Southern Pacific, Oakland.

Cumberland Valley Medical Society.—At a meeting in Chambersburg, August 21, physicians of Washington County, Md., and of Cumberland, Adams and Franklin counties, Pa., met and appointed a committee consisting of Drs. John J. Coffman, Scotland; Robert W. Ramsay and P. Brough, Montgomery, Chambersburg; A. Barr Snively, Waynesboro; W. H. Brosius, Mont Alto, and David F. Unger, Mercersburg, to report on the feasibility of forming this society, at a meeting held in Mont Alto September 8.

BRITISH MEDICAL ASSOCIATION.

Seventy-first Annual Meeting, held at Swansea, Wales, July 28 to 31, 1903.

(By Our Special Representative.)

(Concluded from page 626.)

Leprosy: Its Etiology, Histology and Treatment.

Mr. Jonathan Hutchinson, London, advanced the following propositions:

That an overwhelming body of evidence is opposed to the belief that leprosy spreads by an ordinary mode of contagion (the breath, touch, clothes, bites of insects, wounds, etc.).

That hereditary transmission, if it ever occurs, is a rare event.

That commensal communication—that is, by eating food contaminated by a leper's hands—occurs occasionally, but is by no means frequent.

That in all countries where leprosy is not common a great majority of the cases are *de novo*, in the sense that there has been neither inheritance nor any exposure to risk of contagion.

That the facts as regard leprosy point to its being caused by some article of food.

That there is no other article of food which can be reasonably suspected excepting fish.

That the very excessive prevalence of leprosy in certain fishing districts is a fact strongly in favor of the fish hypothesis, and that its excessive incidence in Roman Catholic communities supports the same conclusion.

Various supposed objections to the fish hypothesis were answered, and it was urged that the amount of circumstantial evidence now accumulated is sufficient not only to justify but to demand that measures based on it should be adopted.

The Treatment of Advanced Tuberculous Disease of the Knee-Joint.

Mr. G. A. Wright and Mr. W. F. Haslam contributed a joint paper.

By advanced is implied the stage where operative intervention of some kind is imperative. The paper was based on an analysis of a large number of replies received from hospital surgeons to a series of questions sent to them by the authors. The points considered were:

1. The indications for operation in a case of tuberculous knee. 2. The nature of the operation selected. 3. If erasion is performed—(a) incision; (b) treatment of patella, crucial ligaments, and superficial and deep bone lesions. 4. If excision—(a) treatment of patella; (b) question of fixation of ends of bones. 5. Arrest of hemorrhage. 6. Drainage. 7. Dressings. 8. Splints. 9. Tendency to flexion after operation. 10. As to result in shortening in excision and erasion. 11. The influence of age in deciding as to which operation should be performed. 12. The seat of origin of the disease.

The Pathology of General Paralysis.

Dr. W. Ford Robertson opened the discussion on this subject. He supported the hypothesis recently enunciated by Drs. M'Rae and Jeffrey and himself, on the ground of bacteriologic and other evidence, that general paralysis is the result of chronic toxic infection from the respiratory and alimentary tracts, permitted by general and local impairment of the defenses against bacteria, and dependent on the excessive development of various bacterial forms, but especially on the abundant growth of a diphtheroid bacillus which gives the disease its special paralytic character. The widely-accepted view that general paralysis is dependent on a syphilitic toxemia will be controverted. It was maintained that syphilis only predisposes to the disease by impairing the general and local defensive mechanisms, and that it is merely one of many known agents that contribute to this weakening of the natural immunity. The possibility of the occurrence of a bacterial invasion of certain tissues as an essential part of the morbid process was also considered and some evidence bearing on the question brought forward.

Alcohol in Its Relation to Mental Diseases.

Dr. Theo. R. Hyslop said: The rôle of alcohol in the physical economy of the healthy body is more evil than good, and its use is abuse; in the unhealthy body its use may be compared to a loan—at heavy interest—to cope with immediate necessity, and to enable the bodily processes to recuperate.

In the degenerative processes due to chronic alcoholism the nuclear proliferation and overgrowth of the connective tissue cells appear to be closely related to the continued dilation of the vessels and the consequent increase of exudation of lymph to the tissues. In ordinary inflammation the exudate contains a relatively smaller quantity of proteids than does the blood plasma—owing possibly to the selective activity of the endothelial cells. In this case the extravasated leucocytes tend to undergo rapid destruction and dissolution.

When alcohol is conveyed to the plasma the metabolism of the leucocytes is retarded—owing to deprivation of the tissues of some oxygen; and there is retention and proliferation of the exuded material.

An explanation of the mnemonic defects and perversions due to alcohol is suggested; and it is contended that alcohol *per se* does not cause general paralyis.

The Pathology of Splenic Anemia.

Dr. H. D. Rolleston, in discussing this subject, stated that the term splenic anemia is still often used in a vague sense to describe the clinical association of anemia with splenic enlargement not manifestly due to any definite cause. The relation between anemia and splenic enlargement is a wide subject, and it is therefore proposed to limit this discussion to chronic splenic anemia (primary splenomegaly of Brühl), recently described in greater clinical detail by Osler. The clinical characters of this condition are fairly definite, namely:

1. Splenic enlargement which can not be connected with any recognized cause.
2. Absence of any enlargement of the lymphatic glands.
3. Anemia of a type midway between secondary anemia and chlorosis.
4. Leucopenia, or at most no leucocytosis.
5. An extremely prolonged course lasting years; and
6. A tendency to hemorrhages, especially gastrointestinal, from time to time.

The main question for discussion is whether this clinical entity is a pathologic entity or whether it is merely a combination of symptoms which, under certain circumstances, may be due to a number of different conditions. No doubt some cases regarded clinically as chronic splenic anemia turn out after death to be due to syphilis, thrombosis of the portal vein, cirrhosis, etc., but in other cases there is no morbid lesion except a chronic change in the spleen, which may reasonably be explained as the effect of long-continued toxemic or infective processes. Further investigations—especially blood reactions—are required to show whether these two groups of cases can be separated clinically. Differential blood counts usually show a relative increase in the mononuclear and decrease in the polymorphonuclear leucocytes, but there is nothing pathognomonic. The spleen may show: (1) Increased fibrosis, with atrophy of the malpighian bodies either alone, or (2) in addition to varying degrees of endothelial proliferation; when the latter is very extreme it has been described as a primary malignant growth (Gaucher, Ramond and Picou). Are these appearances different stages in the same process, or are they manifestations of different causes? and to what extent are they pathognomonic of splenic anemia? In some cases hepatic cirrhosis supervenes as a terminal stage (Banti's disease), in other cases slight and latent fibrosis of old date is found in the liver. Is the splenomegaly due to processes originating in the intestinal tract, and so an allied condition to cirrhosis of the liver? Bacteriologic examination of the spleen has not yet given any help. Further knowledge as to the state of the bone marrow, and of the factors inhibiting its hemopoietic activity in splenic anemia, is wanted. In conclusion, although chronic splenic anemia may be regarded as a clinical entity its causation is unknown, and at present, therefore, there is not sufficient evidence to consider it a definite pathologic entity.

Treatment of Convergent Squint.

Mr. Gustavus Hartridge said the treatment of convergent concomitant strabismus in a scientific manner can only be approached by the consideration of the various factors which help to produce the disorder, and by a careful examination of every case, so that the value and importance of each factor may be ascertained.

Concomitant convergent strabismus is a condition affecting both eyes—it is a binocular defect, and is the result of excessive innervation of the internal recti muscles excited by the associated act of accommodation. The factors which may assist in the production of squint are:

1. Hypermetropia.
2. Imperfect development of the fusion faculty.
3. Defective visual acuity in one eye.

4. The anatomic position of rest of the eyes.

These various factors do not play the same part in every case; they may not all be present, hence a careful and systematic examination of each case is essential. The objects to be obtained by treatment are:

1. The correction of the deformity.
2. Establishment of binocular vision for all distance.

The treatment may be divided into: Optical, orthoptic, operative.

The importance of an exact optical correction is beyond all question, and in many cases results in a complete cure. Orthoptic exercises are of great value in many cases, but must be commenced early. They consist of:

1. Covering up the fixing eye for a certain time daily.
2. Practice with a stereoscope.
3. Bar reading.

The optical and orthoptic treatment must be faithfully carried out for twelve months before any operative treatment can be entertained. When an operation has been decided on we have to decide: What operation shall be undertaken? We have at our disposal four operations:

1. Simple tenotomy of one or both eyes.
2. Simple advancement.
3. Tenotomy with advance of the opponent muscle.
4. Stretching of one of the muscles.

The chief points on which he invited discussion were:

1. When is an operation necessary or justifiable?
2. What operation gives the best results?

Operations on the Temporal Bone for Otitis Media Purulenta.

Dr. Arthur Hartmann, Berlin, spoke on this subject.

1. *Acute Inflammation.*—As a rule, in opening the mastoid in acute inflammation the antrum should be opened in order to have free communication with the tympanic cavity.

Only in cases of abscess in the mastoid, if the internal wall of the abscess seems to be healthy and if there is no swelling in the meatus and on the upper part of the membrane, we need not open the antrum.

In order to effect a rapid and lasting cure the entrance to the cavity must be made very wide. All the bone over the diseased part and the external part of the posterior wall of the meatus must be removed. After this the soft integuments fill the cavity.

2. *Chronic Inflammation.*—The operation on the temporal bone in chronic purulent inflammation of the middle ear when it can not be cured by other treatment, including that by the tympanic tube and by excision of the ossicles, consists in the radical operation.

The radical operation must be so performed that all affected parts of the cavities are rendered accessible and visible.

For this purpose:

1. All the bone outwards of the affected parts must be removed.
2. The external meatus must be much enlarged.

This enlargement can be effected:

(a) If the destructions are not very great by means of Korner's flap.

(b) In cases of large destructions, as in cholesteatoma, by the Y cut of Siebenmann, combined with the excision of a part of the cartilage of the choncha.

For cases of labyrinthine suppuration the labyrinth can be opened without injuring the facial nerve either from the semicircular canals or from the promontorium according to the seat of the disease.

The Pathology and Treatment of Chorea.

In descanting on this subject Dr. D. B. Lees spoke of the chorea of childhood alone. He said chorea is not merely a disorder of muscular movement. There is clinical evidence of an abnormal state of the rolandic cortex, as also of other parts of the brain. He alluded to the implication of speech, of memory, and of the mental and moral faculties. The morbid state sometimes in chorea is intense, often very chronic, yet not destructive, and usually ends in complete recovery. This suggests that the cause is probably a toxemia.

He described the pathologic and histologic results in fatal cases. There is clinical evidence of a morbid blood state in chorea. Any of the manifestations of rheumatism may accompany it. Strength of the evidence of the connection between the two can only be appreciated by keeping all these manifestations in mind. Chorea is often the first rheumatic symptom. Bacteriologic evidence is as yet scanty, but suggestive.

He concludes that chorea is, in the great majority of cases, essentially a rheumatic symptom. Other causes are possible, but rheumatism should be suspected in every case.

Antirheumatic treatment, if sufficiently vigorous, produces very satisfactory improvement in acute chorea. Large and frequent doses of salicylate are required. Other measures should be employed. Insufficient doses are usually given because of the tradition that salicylate is a cardiac depressant. This action is really due to acute rheumatic dilation of the heart, and not to the remedy. The chronic cases are naturally less influenced by the drug because motor centers may remain abnormally excitable after the action of micro-organisms has ceased, yet here also the salicylate is of service, if used freely. Other remedies should be used, such as arsenic, antipyrin, ergot, etc.

The Upper Respiratory Tract as a Source of Systemic Infection.

Dr. deHavilland Hall brings forward cases to show that typhoid fever may start in the larynx. He points to the initiatory symptoms of measles, influenza and whooping cough as clearly indicating that the virus of these diseases enters the system through the upper respiratory tract. Diphtheria is essentially a local disease at its commencement, and the specific bacilli may enter at the nose, nasopharynx, pharynx (the usual situation) or larynx; the secondary symptoms are due to the absorption of toxic materials secreted by the bacilli during their growth. Cases are brought forward to show that the virus of scarlet fever may enter the system through a wound of the nasal mucous membrane. He is of opinion that there is much to be said in favor of the view that tonsillitis is a primary infective disease of the lacunæ, and that rheumatic fever is a secondary disease arising from the absorption of microbes or their products into the system. He emphasizes the importance of the careful treatment of even slight tonsillar affections in view of the danger of systemic infection. Septicemia, pyemia and erysipelas are shown to be diseases which certainly enter the system in many cases through the upper respiratory tract. Occurrence of primary tuberculosis of the nose, pharynx and larynx, and the recognition of latent tuberculosis of the tonsils, both faucial and pharyngeal, point to the possibility of the tubercle bacillus entering the system via the upper respiratory tract. Cases of syphilitic infection through primary sores in nose, nasopharynx, pharynx and larynx are mentioned.

Dr. Jobson Horne, in a paper on the same subject, deals mainly with three points: 1. That the upper respiratory tract is more frequently than is generally stated a site of primary infection with systemic diseases other than those commonly assigned to it, and that a more routine examination of the region should be made in the clinical investigation of diseases of obscure origin. 2. That the region is not only a source of, but is also a factor in, modifying or arresting infection. Lastly the surgical treatment of such diseases is considered with reference to the foregoing.

By way of illustrating these points the following diseases are more especially discussed: Infective endocarditis, tuberculosis, lymphadenoma and lymphosarcoma.

As to infective endocarditis, evidence is adduced to show that the primary infection at times is in the larynx.

In regard to tuberculosis, the relative virulence of moist and dry infection is considered. The part played by the upper respiratory tract in tuberculosis is regarded as three-fold: (a) Direct inoculation—e. g., primary tuberculosis of nose, fauces, postnasal space, soft palate, pharynx, partoid gland, tongue, larynx. (b) Indirect infection, the lymphoid tissue acting as a channel to convey infection—e. g., primary tuberculosis of the ear, of the cervical lymphatic glands, descending infection of lungs via cervical lymphatic system. (c) Bactericidal action, the lymphoid tissue modifying or preventing infection.

As to lymphadenoma, the relationship of the disease to tuberculosis is considered, and positive evidence is adduced to prove that the disease may be regarded as parasitic, and that infection at times occurs through the upper respiratory tract. Cases in which this evidence is complete were cited.

Relative to lymphosarcoma, pathologic evidence is offered in favor of the thoracic disease, histologically described as "lymphosarcoma," being due to infection through ulceration of the larynx.

The surgical treatment of tuberculosis of the larynx and lymphadenoma was considered with reference to the foregoing remarks.

Officers.

The president-elect of the association is William Collier, M.A., M.D., F.R.C.P., Oxford, and Oxford, England, was selected as the place for holding the next annual meeting.

CANADIAN MEDICAL ASSOCIATION.

Thirty-sixth Annual Meeting, held at London, Ont., Aug. 25 to 28, 1903.

(Concluded from page 627.)

President's Address.

Dr. W. H. Moorehouse, London, Ont., delivered the president's address on the evening of the first day. He urged the need of a uniform standard of medical education throughout the dominion, and he thought that this would be brought about as soon as the political horizon became cleared.

THE PATENT MEDICINE EVIL.

President Moorehouse spoke in vigorous terms of the patent medicine craze. The evils were many and readily understood. Certainly not the least was the alcohol habit, which, under the insidious insinuating form of a harmless medicine, was stalking in our midst like a midnight pestilence. Continuing, he said:

> Can not something be done to shield the public from this great evil? Shall we, the members of this enlightened profession, who see this monster, with its many-sided evils, having its bold, indecent advertisements in the press, pervading even the religious journals, clothing these nostrums with an air of respectability; we, who daily meet in our rounds melancholy examples of this terrible delusion, I say, shall we not raise our voices in loud protest against it?

Resolutions.

Resolutions were adopted, one asking the British Medical Association to meet in Toronto in 1905, another pledging the endeavors of the members to bring about a system of municipal sanatoria for the treatment of tuberculosis.

The Cardiac Complications of Influenza.

Dr. E. G. Wood, Nashville, Tenn., said that only a want of recognition of the cardiac dangers can account for the common practice of administering such large and frequently repeated doses of the coal-tar drugs in influenza. Months after an attack of la grippe a man still complains of unusual weakness; he is short-winded and sweats on slight exertion. Physical examination may be negative, yet he is suffering from cardiac weakness due either to functional or muscular disease of the organ.

The cardiac complications may be divided into organic and functional.

ORGANIC.

1. *Pericarditis* is either primary, when it complicates influenza without other organs being affected, or secondary, where it occurs in association with pneumonia or pleurisy, the latter being more frequent.

In grippal pericarditis purulent effusion is comparatively frequent and myocarditis is commonly associated with it. Pericarditis may be present without symptoms.

2. *Endocarditis.*—This occurs more frequently than usually supposed. It is rarely primary, and in the great majority of cases it is secondary to pneumonia. The infective agents are the pneumococcus, streptococcus, staphylococcus and the bacillus of Pfeiffer. Endocarditis may be (1) simple, (2) ulcerative. The simple may present the usual symptoms or may be unrecognized. Ulcerative endocarditis may occur during the attack, but appears more frequently in the convalescing period.

3. *Myocardial Changes.*—The bacillus of influenza elaborates a poison which causes degenerative changes in the myocardium, and when convalescence begins and the patient gets up the heart muscle is unable, under the increased strain, to perform its functions, and palpitation, dyspnea, weakness and collapse are complained of. These symptoms call for a careful examination. A small, feeble pulse, unusually slow or rapid, with a short, feeble first sound, a weakening of the second sound, and a weak cardiac impulse, with increased deep dulness make us think of myocarditis with dilatation.

FUNCTIONAL DISTURBANCES.

The symptoms are attributed to the action of the influenzal poison on the cardiac nervous mechanism; either on the vagus or the cardiac ganglia. The principal functional cardiac disturbances are: 1, palpitation, which is very common; 2, irregular action of the heart; it may occur during or after the attack; 3, bradycardia, which is the most dangerous, as it sometimes leads to fatal syncope; 4, tachycardia; this is more common than bradycardia. These functional disturbances are often difficult to diagnosticate from the organic affections; they usually disappear in a few weeks.

As a rule, in addition to significant subjective symptoms, physical examination will show a feeble, diffuse cardiac impulse with a weak first sound, and in many cases an increased area of dulness. The strength and character impulse and sounds are much more important than the presence of a murmur or irregular rhythm.

In conclusion the author depreciated the use of coal-tar products, especially in patients past middle life.

DISCUSSION.

Dr. Samson, Windsor, in the discussion spoke strongly against the use of the coal-tar products in influenza.

Dr. McPhedran, Toronto, said that in certain cases he thought they were allowable, and that the number of cardiac cases found in influenza was relatively small. He had seen no organic ones.

Dr. H. A. McCallum, London, thought that strychnia and digitalis should be used.

The Relation Between the General Practitioner and the Specialist in Regard to the Treatment of Intranasal Disease.

Dr. J. Price Brown, Toronto, Ont., said that if the required treatment can be done by the family physician by all means let him do it, but if not he should refer the case to the specialist. Every practitioner should be able to examine the nose with the rhinoscope both anteriorly and posteriorly, to discriminate between the normal and abnormal and to diagnose the principal forms of disease which may be found within the organ.

Many conditions he can treat successfully. The instruments he may require are neither very numerous or costly. They consist of head mirror, throat mirrors of different sizes, nasal spiculæ of different widths, curved or angular scissors, cotton applicators, tongue depressor, saws, snares, insufflators and atomizers.

There are certain conditions which simple treatment will relieve, but in which persistent and regular treatment is imperative; particularly atrophic rhinitis. In many cases of subacute and chronic catarrh, the general practitioner can do all that is required. The author outlined the treatment of these affections.

Other papers read were by Dr. H. Meek, London, Ont., on Alexander's operation; Dr. P. G. Goldsmith, on "Causes and Treatment of Postnasal Discharge." Cases of various conditions were reported by Drs. Hadley Williams; J. Alex. Hutchinson; John Wishart; R. Ferguson, London, Ont.; H. Howitt, Guelph, Ont.; Hodge, London, Ont.; and R. B. Robinson, Ottawa. Drs. Geo. M. Gould, Philadelphia, and E. J. Barrick, Toronto, also read papers.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Night-sweats.

The following combination is recommended by *Le Mois Therapeutique* in the treatment of night-sweats due to tuberculosis:

℞.	Balsami peruvianæ	m. xv	1	
	Acidi formici			
	Chloralis hydratis, āā	gr. lxxx	5	
	Alcoholis (pure)	℥iiiss	100	

M. Sig.: Sponge the body with the foregoing combination at bedtime.

The following combination is frequently used locally in the treatment of night-sweats:

℞.	Alumeni	ʒiv	15	
	Alcoholis	ʒii	8	
	Aquæ	Oi	480	

M. Sig.: Apply locally night and morning with a sponge.

Sunburn and Prickly Heat.

The following combinations are recommended by *Merck's Archives* in the treatment of sunburn:

℞.	Sulphuris precip.	℥i	30	
	Zinci oxidi	ʒiv	15	
	Olei amygdalæ (expressed)	℥i	30	
	Lanolini	℥i	30	
	Ext. violet	ʒi	4	

M. Sig.: Apply freely two or three times daily; or:

℞.	Ichthyol	ʒii	8	
	Olei amygdalæ (expressed)	ʒii	8	
	Ung. aquæ rosæ	ʒvi	25	
	Lanolini	ʒvi	25	
	Olei rosæ	gtt. ii		12

M. Sig.: Apply two or three times daily; or:

℞.	Olei olivæ	ʒiv	15	
	Menthol	gr. xv	1	
	Ung. aquæ rosæ			
	Lanolini, āā	ʒvi	25	

M. Sig.: To be used as a dusting powder several times daily.

In cases of prickly heat the following is also recommended:

℞.	Calamini	ʒiv	15	
	Zinci oxidi	ʒii	8	
	Ichthyol	ʒi	4	
	Glycerini	ʒii	8	
	Aq. laurocerasi q. s. ad	℥vi	180	

M. Sig.: Shake well and apply several times daily; or:

℞.	Pulv. amyli	ʒiv	15	
	Lycopodii	ʒii	8	
	Zinci oxidi	ʒi	4	
	Ichthyol	ʒi	4	

M. Sig: To be used as a dusting powder several times daily. Alkaline, borax or bran baths at the body temperature are also beneficial. Anointing the body night and morning with some fat, such as petrolatum or cacao butter is of service as a prophylactic measure in persons who are subject to this annoyance. Silk or fine woolen underclothing should be preferred to cotton or linen. Strict attention to the elimination by the bowels and kidneys and a carefully-selected and nutritious diet are of great importance. As a drink, lemon juice or lime juice in barley water is very cooling and relieves the thirst.

Glycoheroin for Cough.

According to Haas and Saxe in *Amer. Med.* the most satisfactory method of prescribing heroin is in the form of the glycerin solution, glycoheroin. They used it in 20 cases of cough and 12 were cured, 7 improved and 2 unimproved. Their conclusions are that this is the best form in which to use heroin: it is especially valuable in whooping cough, as small doses of it are well borne by children and even infants, and the results very prompt and permanent. It is of service in pulmonary tuberculosis, in reducing the cough, nightsweats, pain and temperature without disturbing the appetite and digestion. In acute and chronic bronchitis the most obstinate cases yielded to it.

Mucomembranous Enteritis.

The most frequent cause of mucomembranous enteritis, according to A. Robin in *Amer. Med.*, is gastric hyperacidity. Consequently to correct the cause the following should be given:

℞.	Precip. calcii carb.			
	Magnesiæ (calcined), āā	ʒiss	6	
	Sodii bicarb.	ʒi	4	

M. Ft. chartulæ No. xii. Sig.: One powder after each meal, in the middle of the afternoon, and at bedtime in a little water.

Careful attention should be given to the diet. Fats, sauces, raw or fried articles, condiments and acid substances should be avoided. He recommends intestinal irrigation to be repeated daily for eight days, then two or three times a week. One quart of water should be used at a time at a temperature of 95 F., to which five or six drops of the tincture of sage (salvia) have been added in order to favor the contractility of the intestine.

Feeble laxatives should be employed; one or two teaspoonfuls of castor oil may be given, to which two or three drops of the following have been added:

℞.	Tinct. opii			
	Tinct. belladonnæ			
	Tinct. hyoscyami, āā	ʒiss	6	

M. Sig.: Three drops added to one or two teaspoonfuls of castor oil and taken as directed.

He also recommends massage daily, following the course of the large intestine.

Epicarin in Tinea Tonsurans and Circinata.

Van Harlingen and Dillard, in *Amer. Jour. Med. Sciences*, report excellent results from the employment of epicarin in the treatment of tinea tonsurans and tinea circinata. It was also used in the treatment of scabies, but with less satisfactory results.

It was used combined as follows:

℞.	Epicarin	ʒiss	6	
	Alcoholis	℥ii	60	

M. Ft. lotio. Sig.: Apply locally.

Or in the form of an ointment, as follows:

℞.	Epicarin	gr. c	7	
	Cretæ albæ	gr. xxx	2	
	Vaselini albæ			
	Lanolini, āā	℥iss	45	

M. Ft. unguentum. Sig.: Apply locally.

Each of the foregoing combinations proved very efficient in the treatment of tinea. However, the results obtained in scabies were not satisfactory, as the ointment irritated the skin quite severely and gave but little relief to the pruritus, which yielded promptly to the naphthol and sulphur ointment.

This preparation, according to the authors, is a condensation product of creasotinic acid and beta-naphthol, therefore combining the properties of creasote and naphthol. It is a reddish amorphous powder, soluble in alcohol, ether and liquid vaselin.

Chloroform as a Teniafuge.

Chloroform is a very efficacious teniafuge according to M. Leger as noted in *Merck's Archives*. In prescribing it for this purpose he recommends that the patient be kept on a milk diet for twenty-four hours previous to its administration, and a purgative enema given.

The next morning the following mixture is administered:

℞.	Spts. chloroformi	m. xl	2	65
	Syrupi	ʒvi	25	
	Aquæ	℥iv	120	

M. Sig.: To be given an ounce at a time at intervals of forty-five minutes.

Between the third and fourth doses one ounce of castor oil is given or an ounce of German brandy. Very satisfactory results were obtained by him by this method of treatment, as shown by statistics given.

like rash, headache and ringing in the ears and renal irritation, sometimes with hematuria. The bladder symptoms include strangury, which is the most common effect, and irritant action on raw surfaces in the urinary passages. Eight cases of hematuria have been reported with one doubtful case, to which he adds a case personally observed. In one case hemoglobinuria was associated. The more important of these effects have been reproduced by intravenous injections of formaldehyd. The toxic action of urotropin is evidently due to a special susceptibility to the action of formaldehyd in the dissociation of the urotropin molecule or to interference with the usual disposition of formaldehyd in the body, or to the liberation of an unusual quantity of formaldehyd. The toxic effects of urotropin generally disappear completely within a few days after withdrawal of the drug. A number of cases are reported from the literature and personal observation.

29. **Atrophic Rhinitis and Erysipelas.**—Somers' case was one of atrophic rhinitis of long standing, which completely disappeared after an attack of erysipelas. He has found in the literature but two like cases, both reported by the same observer, Francesco, in the *Revue Hebd. de Laryng. d'Otol. et de Rhinologie*, March 8, 1902. The suggestion is offered that in a small class of cases where ozena has been resistant to all other treatment, it might be well to try an injection of Coley's fluid as a last resort.

31. **Prostatectomy.**—Bazet would postpone the operation when only dysuria and nocturnal incontinence exist, until chronic and almost complete retention, when it will give the best result. In the case of incomplete and chronic retention with a residue of three to six ounces and the use of the catheter three or four times every twenty-four hours, prostatectomy should be employed if the prostate is large. Another indication for prostatectomy is the presence of recurrent calculi. Of the contraindications he considers age the first. Beyond 72 years the chances of success diminish and the benefits of the operation for the short period of remaining life are not proportionate. Infection is another contraindicatory factor, especially when it is accompanied by acute congestion and fever and chronic lesions of sclerosis and renal infection already exist.

St. Louis Medical Review.

August 29.

33 Personal Experience in Treatment of Typhoid Fever. W. P. Allee.
34 Ibid. Tinsley Brown.

Cincinnati Lancet-Clinic.

August 29.

35 The Recent Outbreak of Tetanus, with Considerations on the Treatment. N. P. Dandridge.
36 Fees, Collections and Deadbeats. M. A. Tate.
37 *Physicians' Mistakes. George J. Monroe.*
38 Surgery of Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued.) B. Merrill Ricketts.

Brooklyn Medical Journal.

August.

39 *Uses of Ergot. Alfred T. Livingston.
40 Scarlatina. F. E. Lambert.
41 *Some Indications for *Inducing Abortion and Premature* Labor. William P. Pool.
42 Treatment of the Summer Diarrheas of Infants. C. Legrand Kerr.

39. **Ergot.**—Livingston here publishes a paper written a number of years ago, of the same tenor as the one published in The Journal, March 21, 1903. One of the opinions that he now holds, different from those expressed then, is that ergot acts directly on the fiber of the muscles instead of on their vasomotor centers. In the main the ideas are about the same, proclaiming that ergot is the equalizer of the circulation.

41. **Abortion.**—The indications for abortion are stated by Pool as: Contracted pelvis, in which he advises operation in the thirty-sixth week in suitable cases; chronic nephritis; diabetes; pernicious vomiting (as a last resort); heart disease with aortic murmur, mitral stenosis and cardiac insufficiency; tuberculosis in which possibly curable cases may be made incurable by this physiologic function of pregnancy. He says a woman having an active form of tuberculosis, as evidenced by physical signs and the discovery of the bacillus, should not become pregnant. If conception occurs it would be advisable to terminate the pregnancy at the earliest possible moment.

Archives of Pediatrics, New York.

August.

43 *A Case of Decapsulation of Both Kidneys in a Boy Nine and One-half Years Old. Thomas M. Rotch and H. W. Cushing.
44 **Varicella Gangrenosa; Its Apparent Frequent Association with Tuberculosis.* William A. Edwards.
45 The Determination of Fat and Total Solids in Milk. Henry L. K. Shaw.
46 Deficient Proteids in Infant Feeding. Vanderpoel Adriance.
47 *A Note on *Abdominal* Auscultation. Henry L. K. Shaw.
48 Report of a Case of Thymus Enlargement in an Infant; Sudden Death; Autopsy. Eleanor C. Jones.
49 Report of a Case of Tonsillar Ulcer of Vincent. Lawrence T. Royster.

43. **Kidney Decapsulation.**—The case reported by Rotch was unsuccessful, the child dying two weeks after operation, but still it was of interest as showing a temporary improvement. The death was unexpected, as the patient endured the operation well. The case was an extreme one with serious impairment of function of the kidney, and without the operation death was inevitable in a short time.

44. **Varicella Gangrenosa.**—Edwards calls particular attention to the relations of this condition with tuberculosis, but even here he holds that it is probably due to the ordinary pathogenic organisms. The lack of resistance of a tuberculous patient to infection of all kinds and the probability of his having staphylococci and streptococci already in the respiratory tracts favors its occurrence.

47. **Abdominal Auscultation.**—The value of abdominal auscultation in infants is noted by Shaw, who shows that in young children the respiratory sounds are transmitted and can be distinctly heard well over the abdomen. All adventitious sounds, especially from the lower lobes of the lungs and the lower and diaphragmatic portions of the pleura, are generally so transmitted that they are recognizable, and sounds thus heard are synchronous with respiration and differ from the usual intestinal sounds. His attention was first called to this fact over a year ago in a case of lobar pneumonia. Râles could be heard over the abdomen before they were audible over the chest. Since then he has listened over the abdomen of a large number of infants to determine the diagnostic value of abdominal asculation.

Illinois Medical Journal, Springfield.

August.

50 **Traction Injuries of Arteries. S. M. Wylie.*
51 The Legal Status of the Doctor. Herbert C. Jones.
52 *On the Toxicity of Methyl Alcohol in Extracts and Medicine. R. H. Main.
53 Radiotherapy, with Report of Eleven Cases. Charles D. Center.
54 Clinical Report of Two Tumors Benefited by the X-Ray. W. J. Eddy.
55 Retinal Hemorrhages in Relation to Degenerations of the Circulatory Apparatus. Thomas A. Woodruff.
56 Modern Surgery of Congenital Cleft Palate in Infancy. S. R. Hopkins.

50. ***Traction Injuries of Arteries.***—Wylie notices the injuries of the arteries that may be due to contusions or traction, and suggests that in every case of injury to an extremity, subject to traction or contusion force, the circulation should be carefully noted, and if there is absence or feebleness of arterial pulsation, a careful inquiry should be made to determine, and, if possible, to locate the cause by stethoscopic examination along the exposed part of the vessel for adventitious sounds, etc. He gives cases of injury of the popliteal and axillary arteries and their treatment, which consists in rest and immobilization, external heat and careful watching for the return of circulation. Until artery resection with suture of the entire circumference of the vessel becomes a more practical procedure than it is at present, it offers no hope of overcoming the difficulty. When there is complete death of the part supplied by the arteries, amputation is the only recourse.

52. **Methyl Alcohol.**—Main finds that methyl alcohol is an active and dangerous poison, extensively used in extracts, spirits and medicines intended for internal use, and that its presence is not suspected by the consumer. In this way it has caused death or blindness in numerous instances. He suggests that the Pure Food Commission require every manufacturer to print on the packages the formula of the contents,

and prosecute every one failing to do so. He advocates also a federal tax on methyl alcohol, so that its substitution for grain alcohol would be unprofitable.

Mobile Medical and Surgical Journal.

July.

57 *One Hundred Consecutive Cases of Myoma of the Uterus. Guy L. Hunner.
58 Other Sources of Typhoid Infection than Through the Medium of Drinking Water, and How to Guard Against Them. Searle Harris.
59 *Hay Fever. Paul S. Mertins.
60 What Precautions Should Be Taken by the State and Municipalities in the Care and Management of Tuberculous Patients? W. H. Blake.
61 Some Remarks on the Causes of Convulsions in Children. William C. Williams.

August.

62 A Trip to England and Some Reminiscences of Lord Lister. E. L. Hill.
63 *Tuberculosis in Animals, with Special Reference to Bovine Tuberculosis. C. A. Cary.
64 Am I My Bother's Keeper? J. R. G. Howell.

57.—This article appeared elsewhere. See THE JOURNAL of August 29, ¶52, p. 580.

59. **Hay-Fever.**—Six cases treated by adrenalin are reported by Mertins. In all the patients found it the best thing they had ever used. In three the disease was aborted and in three the symptoms were almost completely relieved. No unpleasant effect or habit followed. He considers adrenalin almost a specific in relieving the conditions.

63. **Tuberculosis in Animals.**—Cary's paper is largely a citation from the literature, and he finds that human tuberculosis can be transmitted to the lower animals and bovine tuberculosis to other animals. There is strong evidence that many infants and older children have contracted tuberculosis from the drinking of milk from tuberculous cows, and undoubted cases of accidental human inoculation with the bovine bacillus have occurred. He believes that tuberculous cows can be kept for breeding purposes if isolated from their own calves and the healthy cattle, and the milk thoroughly sterilized before feeding it to cattle and pigs. They may also be used as food provided the tubercular lesions are few and can be removed without infecting the meat and the meat is thoroughly cooked. All meat-producing animals, especially cattle and swine, should be carefully inspected before their flesh is utilized and all highly infected animals condemned and tanked. Thorough cooking is needed in every case.

St. Louis Courier of Medicine.

August.

65 *Vibration Massage in the Treatment of Chronic Prostatitis. Louis E. Schmidt.
66 The Prophylaxis and Treatment of Scarlet Fever. E. W. Saunders.
67 Veratrum Viride in Puerperal Eclampsia. W. L. Johnson.
68 Malaria; a Review of Some Recent Literature. (To be concluded.) John Zahorsky.
69 *A Therapeutic Suggestion. H. N. Chapman.

65. **Vibration Massage.**—Schmidt recommends the use of vibration massage in prostatic hypertrophy, especially in cases where the usual massage fails and also those where small inflammatory nodules are left after general inflammation. Vibratory massage is applied to each nodule and defines them by their sensitiveness. It can also be recommended in isthmical inflammation combined with old infiltrations in the prostatic urethra and hypersensitiveness of the caput gallinaginis. The best instrument for this purpose is the Benique sound, to which a metal spiral is attached, and vibration given to this with a hammer. He would also advise it in case of simple sexual exhaustion where no infection or inflammation of the prostate exists. The mechanical appliances which can be controlled by electric motors are suggested as the best means for this form of therapy.

69. **Mammary Cancer.**—A therapeutic suggestion of Chapman is to use the x-ray for all forms of mammary cancer, not for the treatment of the breast *per se*, but to put the axillary glands in as perfect a condition as possible. When this is done, the cancerous mass should be removed with a knife, but the axillary glands preserved as a defensive barrier. After the wound has healed the glands and breast should be again submitted to the x-rays. This suggestion is offered after the experience with and observation of four cases, the axillary glands being removed in each and in each case the final result was disastrous.

Pediatrics, New York.

August.

70 *Diseases of Children Due to Faulty Nutrition. William N. Sullivan.
71 *Of What Value Are Drugs in the Treatment of Children? Frederick Leavitt.
72 School Life in Relation to Health. J. H. McCassy.
73 A Case of Mitral Stenosis. Francis W. Sinkler.
74 Endocarditis Following Diphtheria. Henry D. Jump.
75 *Practical Notes on the Diagnosis of Infantile Eclampsia. John Zahorsky.

70.—This article appeared elsewhere. See THE JOURNAL of July 25, title 104, p. 284.

71. **Drugs in Infant Diseases.**—Leavitt's article is a skeptical one as to the value of drugs in diseases of children. He finds that as many cures are accomplished with placebos which contain practically no drugs at all as in energetic drugging. He says he does not mean to be a nihilist as regards medicine, but thinks that the community of children is certainly overdosed. Of a few drugs he makes partial exceptions, such as castor oil and calomel in acute gastroenteric affections and the special use of certain drugs in poisoning, heart failure, etc. Quinin is an antiperiodic and prophylactic in malaria and mercury and potassium iodid useful in syphilis. Antitoxin in diphtheria is certainly a godsend, but there are very few others for which he says a good word.

75. **Infantile Eclampsia.**—The influence of peripheral irritation in producing eclampsia is questioned by Zahorsky, and he thinks that we should sharply distinguish between great irritability of the nervous system due to high fever and to that caused by faulty nutrition. A toxic, circulatory, organic, or functional disease of the brain or meninges must be considered in the diagnosis of cases of convulsion. In his observation in the last few years he has found some constitutional or general disease at the bottom in nearly every case. He does not mean that peripheral irritation should not be sought, but the first question to ask is, what induces the increased irritability?

Columbus Medical Journal.

August.

76 *The Extension of Infection in Otitis Suppuration. John Edwin Brown.
77 *What the Medical Practice Act Has Accomplished in Ohio. S. B. McGavran.
78 The Development of Obstetric Surgery. James U. Barnhill.

76. **Otitic Suppurations.**—Brown reports several cases of otitis suppuration, 5 of extradural abscess, 1 perisinuous, 2 of sinus thrombosis and 3 of meningitis, all except the last mentioned three surviving, thus bearing out the opinion of surgeons as to the uniform fatality of meningitis in these cases. Nearly all were operated on.

77. **The Ohio Medical Practice Act.**—M'Gavran details the progress that has been made since the passage of the medical practice act, the opposition which it first received and the general good effects that have followed its execution. It has compelled not less than 500 so-called practitioners to give up practice and a good deal more than that number have left the state without attempting to register. Its opponents have been converted to its support. The medical colleges have practically been reformed and the three fraudulent ones that existed abolished. Ohio, instead of being the dumping ground for other states, has been elevated to the very first rank.

Woman's Medical Journal, Toledo.

July.

79 Iritis Spongiosa. Adeline E. Portman.
80 Diarrheal Diseases of Children. Jennie Ghrist.
81 Nephritis Albumenoso; Report of Case. Mary A. Ardery.
82 Medical Ethics. Margaret E. Colby.
83 Rupture of the Heart; a Case. Minerva Porter-Wertz.
84 President's Address, State Society, Iowa Medical Women. Jessie V. Smith.

Northwest Medicine. Seattle, Wash.

August.

85 Some Characteristics of the Human Mind. J. B. Loughary.
86 The Prevention of the Spread of Venereal Disease. M. Hugh Foster.
87 Operative Treatment of Abnormal Tonsils. John A. Donovan.
88 The Penalty of Genius. Ernest Crutcher.
89 Methodical Training in Surgical Technic. R. C. Coffey.
90 A Fatal Case of Hemorrhage from Placenta Previa; Inversion of the Uterus; Recovery. George S. Wright.

dragging on the attachment of the peritoneum to the abdominal wall, especially when the appendix is fixed by adhesions. The lessened severity of this initial pain without improvement in the general condition is due to cessation of peristalsis, owing to inflammations having spread to the muscular coat of bowel. The development of local pain, which as a rule precedes by some short time the cessation of umbilical pain, means that the inflammation has spread from the appendix to the parietal peritoneum or to the post-peritoneal cellular tissue, the only structures immediately concerned which are supplied with nerves capable of transmitting painful sensation. The absence of local pain means nothing, and he has more than once operated and found the appendix in a very bad condition, while the patient never had more than a twinge. Severe pain, however, is of serious import, as it implies either wide extent or great severity of inflammation. Deep and superficial tenderness are noted. Both may be present at once. In addition to the deep tenderness which usually exists, there is often a marked degree of cutaneous hyperesthesia, indicating that the corresponding spinal center is receiving from some part of the body unwonted stimuli, and in consequence is unduly sensitive to ordinary impressions. One point of very great importance is that the sudden cessation of this hyperesthesia without any corresponding improvement in the general symptoms, suggests gangrene and immediate operation.

9. **Stokes-Adams Disease.**—Osler's paper is a full account of the Stokes-Adams syndrome, illustrated by the histories of numerous cases and with special remarks on the peculiar characteristics of disease varieties—the post-febrile, arterio-sclerotic, neurotic and senile types, special cardiac symptoms, etc. In the late forms the outlook is bad, though in young persons recovery and cure may be expected in a few cases. In such it might be advisable to try the remedies that may have an influence on the sclerosis, such as iodid of potassium in syphilis, and, with high tension, the nitrites. In senile cases with vertigo he thinks it is doubtful whether we can do more than keep the bowels open and regulate the diet. We have no remedy at our command which will accelerate a permanently slow pulse. A quiet, well-regulated life helps to ward off attacks of vertigo and syncope as in angina pectoris. In spite of the utmost care life may be a burden with the recurring seizures. For the syncopic attacks nitrite of amyl and strong ammonia may be used, and they may often prevent an attack if there is a warning. Brandy, ether and strong cardiac stimulants may be required to revive the patient in the protracted attack. The epileptiform and pseudo-apoplectic attacks may sometimes be prevented by posture. With signs of heart dilatation and many abortive systoles and infiltration of the bases of the lungs, digitalis may be cautiously tried.

12. **Aspirin in Chorea.**—This drug has been employed in 35 consecutive cases of chorea in outpatients at the Ancoats Hospital and the Manchester Royal Infirmary by Williamson, and the details of 8 cases are given. Among these 35 cases there were some of long duration where the symptoms proceeded unchanged, and every means had been tried without effect until this drug was given. In some mild cases very slight medication will sometimes help, and the fact of their doing well under aspirin is not so significant, but in the severe cases like those referred to, it seems of some importance. He can not regard it, he says, as a specific for chorea, but the results of its administration are so favorable as to indicate the probabilty of a beneficial action of the drug, and to suggest further observations.

13. **Amputation Under Hypnotism.**—See editorial, September 5.

Indian Medical Gazette, Calcutta.

August.

16 A New Field Service. C. Dooly and C. M. Thompson.
17 Red Water and Rinderpest in Cattle. Stewart Stockman.
18 Indian Milk Supply and Infective (Epidemic) Diarrhea. D. Simpson.
19 *Note on the Mycoid Body Found in the Blood Corpuscles in Remittent Fevers. (Continued.) W. Leonard Braddon.

19. **Remittent Fevers.**—Braddon holds that the mycoid bodies found in cases of remittent fever are not the relics of blood plates, but are true parasites, many of them containing masses exceeding that of the original enclosing red corpuscles. To what class of organisms they belong he thinks is uncertain. He suggests, however, from the hypha-like appearance of the filaments, their mobility at certain stages and their final apparent contraction recalling the true plasmodium of certain fungi, that their place may be among mycetozoa.

The Journal of Tropical Medicine, London.

August 15.

20 *Mosquitoes and Steamers. Andrew Balfour.
21 Eosinophilia Associated with Dracontiasis. Leonard S. Dudgeon and F. J. Child.
22 *Yellow Fever and Mosquitoes. Ivo Bandi.

20. **Mosquitoes in Steamers.**—Balfour calls attention to the fact that the bilge water of steamers is often swarming with the larvæ of mosquitoes, and that attention should be given to this fact. A ship-bred mosquito might very well pay a flying visit ashore and come back infected and spread the epidemic in its accustomed quarters.

22. **Yellow Fever and Mosquitoes.**—Bandi offers a criticism on the theory of yellow fever transmission by mosquitoes, calling attention to the fact that the *Stegomyia fasciata* is a day biter, and yet in Rio Janeiro those who pass the nights outside the infected limit escape the disease. If the *Stegomyia fasciata* were the sole transmitter of the disease it is difficult to see how spending the nights away from its haunts would secure an immunity.

Australasian Medical Gazette, Sydney.

July 20.

23 Mechanism of the Paroxysmal Neuroses. Francis Hare.
24 Address, South Australian Branch of British Medical Association. Arch. A. Hamilton.
25 Aphasia as a Result of Heat Exhaustion. R. E. Weigall.
26 Notes on a Case of Freyer's Prostatic Operation. Arthur T. Vallack.
27 Perineal Prostatectomy. H. L. Maitland.

Intercolonial Medical Journal of Australasia, Melbourne.

July 20.

28 The Medical Aspect of Hydatid Disease. Alfred A. Lendon.
29 The Surgical Aspect of Hydatid Disease. W. Moore.
30 General Considerations Concerning Tumors. H. B. Allen.
31 Carcinoma of the Tongue. G. A. Syme
32 Disseminated Sclerosis in a Child. D. McM. Officer.

Bulletin de l'Academie de Med., Paris.

Last indexed page 897.

33 (No. 27. July 7.) *Presence of Foreign Bodies in the Nerve Cells. G. Marinesco (Bucharest).—Présence des corps étrangers (substances cristallines et microbes) dans les cellules nerveuses en rapport avec la théorie de l'amiboisme nerveux.
34 (No. 28.) *The Tuning Fork in Medicine. Mignon (Nice).—L'usage du diapason en médecine.
35 (No. 29.) Kératite traumatique ulcéreuse compliquée d'iritis, traitée avec succès par la dionine. E. Tillot.
36 Firearm Wound in Left Rolandic Region. Nimier.—Coup de feu dans la région rolandique gauche avec hernie cérébrale; aphasie, hemi-contracture droite; extraction d'esquilles et reéducation motrice.
37 Comparative Study of Hygiene in the French Navy and Merchant Marine. Committee Report.—Progrès realisés à bord du cuirasse "Suffren,' etc.

33. **Foreign Bodies in Nerve Cells.**—Marinesco found crystals in the nerve cells in the cadaver of a woman succumbing to a hemorrhagic meningitis. They responded to the tests for hematoidin. He has also discovered lepra bacilli in the nerve cells of the spinal ganglia. These phenomena might be accepted as evidences of ameboid movements on the part of the nerve cells, but Marinesco does not believe that this is the true explanation. He thinks that the hematoidin probably entered the cell in a saturated solution, and was precipitated in the form of crystals on encountering substances in the cell endowed with a catalytic action. He believes that bacilli may be swept into the nerves by the lymph stream. He has never discovered them in the cylinder-axes.

34. **The Tuning Fork in Medical Diagnosis.**—Mignon calls attention to the varying resonance of the internal organs and tissues transmitting the vibrations of a tuning fork applied to the skin above them. He uses the phonendoscope with the tuning fork and states that important information may thus be derived in examining the sinuses, lungs, skeleton and various organs.

Presse Medicale, Paris.

38 (No. 57.) Nouveaux cas de guérison de cancers par la cancroine de Professor Adamkiewicz. A. Renault.
39 *Les essais de leucothérapie dans les infections. M. Labbé.
40 Fermentation of Stools. A. Habel.—La fermentation des selles et sa valeur clinique dans quelques maladies.
41 (No. 58.) *Michel Clamps for Fastening the Permanent Catheter. P. Desfosses.—Fixation des sondes à demeure au moyen des agrafes Michel.
42 Kidney Stones in Gouty Subjects. E. Brissaud and M. Brécy. —Formation des depots uratiques spécialement dans les reins goutteux.
43 *Soluble Starch Test of Hyperchlorhydria. L. Meunier.—Diagnostique chimique de l'hyperchlorhydrie par la recherche des matières amylacées solubles.
44 *Technique de la resection du ganglion de Gasser par la voie du plan osseux spheno-temporal. E. Juvara (Jassy).
45 (No. 59.) Les origines de la médecine scientifique. L. MacAuliffe.
46 Les variations du coefficient nutritif cellulaire. J. Mitulesco (Bucharest).
47 *La splenectomie dans la maladie de Banti. J. Roger.
48 (No. 60.) Les ictères acholuriques. A. Gilbert and M. Herscher.
49 Exposé critique des résultats obtenus au sanatorium lyonnais d'Hauteville. F. Dumarest.
50 (No. 61.) *Leucoplasie et cancer. Du rôle et de l'importance de la biopsie. J. Darier.
51 Appendicite et Helminthiase. Cantas.
52 Occlusion intestinale et lithiase biliare. L. Weiller.
53 (No. 62.) *Reply to Darier above. E. Gaucher.
54 L'ictère grave dans la première enfance. C. Aubertin.
55 *Tests of Adulterated and Unhealthy Foods. H. Martel.—L'analyse des viandes insalubres et des produits carnés falsifiés.
56 (No. 63.) *Simple and Rapid Means of Purifying Drinking Water. Vaillard and Georges (Val-de-Grace).—Moyen pratique de rendre un eau potable.
57 Bone Marrow in Infections. K. S. De Graag.—La moelle osseuse et ses éléments dans l'infection staphylococcique chronique.
58 (No. 64.) The Statue of the Leper King of Cambogia. P. Desfosses.—Le roi lepreux.
59 *Usage et abus des médicaments dans le traitement des maladies chroniques. G. Hayem.
60 L'emploi du formol dans les colorations histologiques. C. Morel and Dalous.

39. **Attempts at Leuco-Therapy.**—Labbé reviews the various experimental work that has been done in the line of inducing hyperleucocytosis in animals as a protection against infection. He shows that the induced hyperleucocytosis, while theoretically a powerful means of aiding the natural defenses, is in practice able to confer a preventive protection only, and seems to be powerless against already established infection. At the same time, he adds, the hyperleucocytosis induced by nuclein—which is the substance that has been most generally employed—is possibly not intense enough for the desired purpose. It is not to be compared with the hyperleucocytosis induced by disease germs. When we have learned some more efficient means of inducing hyperleucocytosis in animals, it is possible that the results of this leuco-therapy may be applied to man with success.

41. **Michel Clamps for Fastening the Permanent Catheter.**—The little clamps or agrafes invented by Michel for suturing the skin are being used more and more in France and this country. The latest use to which they have been applied is to hold the permanent catheter in place, a thread around the catheter being tied to one of the clamps stuck into the skin.

43. **Chemical Diagnosis of Hyperchlorhydria.**—Meunier announces that the determination of the total acidity and of the free hydrochloric acid is not sufficient to diagnose with certainty a hyperchlorhydric gastric juice. In 20 cases he found that the soluble substances derived from starch after an Ewald test meal varied from 4 to 8 gm., while in 15 normal subjects the amount of these substances ranged from 20 to 88 gm. He thinks it is evident that the power of digestion possessed by the mucosa is of more import than its secreting power. He does not classify a gastric juice as hyperchlorhydric unless after an Ewald test meal it contains less than 10 gm. per 1,000 c.c. of sugars reducing Fehling's solution. Or to state it still more precisely, unless it contains in solution soluble substances derived from the starch, which after transformation into dextrose show a lesser amount of the latter than 20 gm. per 1,000 c.c. Determination of hyperchlorhydria on this basis not only confirms the diagnosis but indicates the proper dietary.

44. **Technic of Gasserectomy.**—Juvara illustrates with numerous cuts the various steps of gasserectomy by the spheno-temporal bone plane route, with the eight instruments required. He performed it recently on a patient with intractable trifacial neuralgia, after numerous experiments on the cadaver. The technic differs very slightly from that followed by Quénu, Sébillot and Poirier.

47. **Splenectomy in Banti's Disease.**—Roger reports 2 cases and emphasizes the fine results that may be obtained from this measure even in advanced cases of this syndrome, which includes enormous hypertrophy of the spleen, hypertrophy of the liver, ascites and low hemoglobin rate. (The untimely death of Dr. Roger was chronicled last week.)

50 and 53. **Excision for Diagnosis in Leucoplasia.**—Gaucher insists on the danger and uselessness of this measure in case of cancer of the tongue. He believes that it is liable to entail a terrible exacerbation of the lesion. Diagnosis is easy without it, he claims. Epithelioma is an isolated, single tumor. In sclerosis, if the ulceration is single, there are other protuberances and multiple fissures. Both sclerosis and gumma, he states, are always located on the upper surface of the tongue, while cancer sometimes occurs on the under surface. Epithelioma forms a harder, more hemorrhagic ulceration; there is a fetid exudation, and the pain, salivation and interference with movements are much more marked than in case of ulcerative sclerosis, while the glands never become enlarged with mere sclerosis or gumma.

55. **Tests of Foods.**—Martel concludes his review of the technic for detecting adulterated and unhealthy foods, with a description of the biologic blood test applied to the differentiation of horse meat from other meats. The precipitating reaction is absolutely specific for pork, horse meat and dog flesh, but beef and mutton may respond indifferently to the test.

56. **Simple and Rapid Means of Purifying Drinking Water.**—Vaillard and Georges utilize iodin as an efficient means to destroy disease germs in the water. They neutralize it afterward with sodium hyposulphite, which combines with the iodin to form sodium iodid, which is harmless, even in much larger amounts than are required for the sterilization. According to the technic they recommend, the chemicals are put up in the form of three colored tablets. The formula for the first is as follows: dry potassium iodid, 10 gm.; dry sodium iodate, 1.560 gm., colored with methylene blue. Tablet No. 2 contains only 10 gm. tartaric acid colored with sulpho-fuchsin, and tablet No. 3 merely sodium hyposulphite, 11.6 gm. Each of the formulas makes 100 tablets. The sodium iodate gives up its iodin in contact with slightly acidulated water and the potassium iodid maintains the nascent iodin in solution. A blue and a red tablet are dissolved in a quart of water, stirring well. The water turns a brownish yellow. This mixture is then poured into the 10-liter vessel full of the water to be purified, which turns yellow. After waiting ten minutes, dissolve the white (hyposulphite) tablet in another quart of water and pour this also into the large vessel. The water loses its yellow tinge at once and becomes limpid and is ready to drink without further delay.

59. **Medication in Chronic Disease.**—Hayem thinks that medicines frequently prevent the benefit that might otherwise be obtained from hygienic and dietetic measures in chronic diseases, especially in tuberculosis. The digestive tract must be spared every source of irritation or fatigue. In his experience the suppression of all medication has frequently abolished all tendency to gastric crises in tabes. He is even inclined to admit that medicinal intoxication is the habitual cause of the nervous forms of chronic affections and possibly also of the nutritional disturbances, cases of cancer excepted.

Semaine Medicale, Paris.

61 (XXIII, No. 29.) *La thérapeutique "in extremis." F. Lejars.
62 Traitement des rétentions rénales par la distension de la vessie (of the bladder). O. Pasteau.
63 Photothérapie des fluxions dentaires. A. Hellion.
64 *Le sérum de Trunecek contre la sclérose de l'oreille et le labyrinthisme. E. Sari.
65 (No. 30.) Les phénomènes de sténose dans les ulcérations tuberculeuses de l'intestin. L. Bard.

66 Letter from America. Surgery of the Stomach in the United States. F. Munch.—La chirurgie de l'estomac aux E. U.
67 Emploi de l'adrénaline contre les hemorrhoides. D. Devilliers.
68 (No. 31.) The Information Bureau for Strangers at Paris.—Création à l'Université de Paris d'un bureau de renseignements scientifiques pour les étrangers.
69 (No. 32.) La sténose du pylore chez les nourrissons (in nurslings). L. Cheinisse (Montpellier).
70 Report of French Congress of Alienists and Neurologists, Brussels, August 1-8. (Commenced in No. 31.) (Fuller Report in *Progrès Medical.*)
71 Letter from America. Prophylaxis of Yellow Fever. F. Munch.—La défense contre la fièvre jaune sur le golfe de Méxique.

61. **Therapeutics in Extremis.**—Lejars regards saline infusion as the most efficient weapon at our disposal when death seems imminent. He relates 2 cases in which after actual bleeding to death warm saline infusion was able to bring back a slight color to the lips, the heart began to beat after ten minutes' arrest, the respiration was gradually re-established, consciousness returned and the patient survived twenty-four hours. In both of these cases death was due to the loss of the vital fluid, the vessels, being empty, were unable to act, but when filled with the saline solution they resumed their function, and if the patients had had a little more vitality left, they could have been saved. De Ott has demonstrated that regeneration of the blood occurs twice as rapidly under the influence of saline infusion as of transfusion of blood. Lejars believes in operating in cases of peritonitis, etc., even when the patient is apparently in extremis, and reports several cases in which the most unexpected success was realized. In one of umbilical pseudo-strangulation with eight days of stercoremic intoxication, the skin marbled with purple, the extremities cold, with regurgitation of fecal matters, the hernia enormous, red and tense, he operated under cocain, sustained by the fact that the breath did not have agonal fetidity and that the pulse, although small, was still perceptible. The patient made a smooth recovery. Progressive depression, irregularity of the heart action and anuria are important indices and also the cyanosis and pronounced hypothermia which indicate that the bulbar centers are poisoned beyond relief by the bacterial toxins. The toxic impregnation at this stage is too advanced for any intervention to have a chance of success, but there is always a chance until this point is reached. Operations in these advanced stages of septicemia, peritonitis, etc., must be simple, short, and be done without general anesthesia. The heart must be guarded above all. Here, again, saline solution by rectum or subcutaneously is the sovereign resource. If the serum does not induce diuresis it is because the kidneys are already fatally compromised and the end could not have been averted. The absence of diuresis thus becomes a valuable sign for the prognosis.

64. **Trunecek's Serum in Ear Affections.**—In a thesis recently presented at Paris Sari describes 16 cases of sclerosis of the middle ear, the labyrinth syndrome or sclerous otitis, treated by subcutaneous injection of Trunecek's serum every second day, the amount varying from 1 to 6 c.c. The symptoms due to the labyrinth (vertigo, sounds in the ear or deafness), were rapidly improved or cured by a small amount of the serum, and transient or permanent success was also obtained in cases of sclerosis of the cavity of the tympanum or labyrinth. On the other hand, those with sclerosis and adhesions consecutive to suppuration were not only not benefited, but in some the symptoms were aggravated by this treatment. The formula for the serum was given in The Journal, xl, page 874.

Archiv f. Verdauungskrankheiten, Boas', Berlin.

Last indexed XL, page 1174.

72 (IX, No. 2.) *Ueber das Distomum spathulatum (Leuckart). Z. Inouye (Chiba, Japan).
73 Zur Klinik der Achylia gastrica und der perniciösen Anämie. Max Einhorn (New York).
74 Fall von epiphrenalem Divertikel des Esophagus. B. Olivetti.
75 *Rektal-Stenose und Parametritis. A. Müller (Munich).
76 (No. 3.) *Verwertung der Erlich'schen Dimethylamidobenzaldehyd-Reaktion für eine quantitative Indol-Probe in den Feces, nebst Untersuchungen über die Eiweissfäulniss im Darme. R. Baumstark (Hamburg).
77 *Zur Methodik des Albumosen-Nachweises in den Feces. H. Ury (Charlottenburg).
78 Digestion of Fat in Stomach. Z. Inouye (Würzburg).—Fettverdauung im Magen.
79 *Sahli's Test of Stomach Contents. E. Zweig and A. Calvo.—Die Sahli'sche Mageninhaltuntersuchung und ihre Bedeutung für die Diagnose der alimentären Hypersekretion.

72. **Distomiasis.**—Inouye reports that in his examination of subjects in various regions of Japan he found eggs of this parasite in from 19 to 71.9 per cent. of the feces examined, the number of subjects in each locality thus examined ranging from 47 to 725. About 71.8 per cent. of his 2,460 patients with distomiasis were males. Regions most affected are those where malaria also prevails. He reviews the symptoms, etc., remarking that treatment can be only symptomatic. Antiparasitic drugs have proved useless. In prophylaxis he warns against drinking or swimming in canal water or eating raw fish or mussels. In one region the mortality from this source has been reduced to zero by such precautions.

75. **Rectal Stenosis and Parametritis.**—Mueller reiterates his former assertions in regard to the frequent causal combination of these affections, the second being secondary to the first. He points out that the sacro-uterine ligaments embrace the rectum, and every inflammation of the latter, especially chronic ones, shorten and stiffen these ligaments. This reacts on the intestine, which becomes constricted, kinked and forced against the sacrum. The uterus may be drawn out of position likewise. He thinks that this rectal origin of gynecologic affections is more common than the gonorrheal, and frequently dates from early life. Childbearing may serve as a vigorous massage to aggravate or relieve the condition. In the former case, the pregnancy is usually regarded as the primary cause. In diagnosing gynecologic affections it is wise, therefore, to test the elasticity of these ligaments, and seek for traces of inflammation in them and in the rectum. Infection of the vicinity from the constricted and possibly ulcerated bowel is more than probable. The hardened ligaments must be softened by warm irrigations, sitz baths and cataplasms, and when loosened, their elasticity must be restored by stretching, and the stenosis combated by massage. Pessary treatment later will promote the restoration of elasticity, but should not be commenced until the inflammatory stage is past.

76. **Ehrlich's Indol Test.**—Baumstark applies the dimethylamido-benzaldehyd test by an original method, which he calls the "extinction method." It consists in diluting and examining the solution of indol after applying the test, comparing it with a control solution until the band in the spectrum characteristic for the mixture vanishes. The indol mixture gives a well-defined band in the spectrum between D and E, commencing at the former, and skatol gives two bands, one at this point and one between C and D. Solutions of various concentration give, of course, bands of varying distinctness, until the dilution reaches a point when the bands are no longer visible. He found that solutions of indol and skatol after applying the reagent rapidly change color. He does not attempt to use an instrument of precision, but finds the pocket spectroscope perfectly adapted for the purpose. He tabulates the findings in applying the test thus modified on various subjects, and extols in high terms the value of this new method of quantitative investigation of the indol. The test is simple, easy, takes very little time, and places in the hands of the internist a method of determining the absolute amount of indol in the feces and urine. In estimating the total putrefaction of albumin in the intestines, the indican and ethereal sulphates in the urine and the indol in the feces must all be determined. He states that in cases of obstipation, achylia, hyperchlorhydria, pernicious anemia and chlorosis the indol was increased to a moderate or extreme extent in his experience, while it was reduced in diarrhea and in one case of achylia. Certain cases exhibiting severe symptoms showed an enormously increased proportion of indol in the urine, while in the feces it was reduced. Such contrasts as these have hitherto escaped observation. As it is impossible to assume increased absorption in these cases, owing to the seriously compromised condition, the explanation must be the loss of the normal oxidizing power for the products of putrefaction that are absorbed. His experience also establishes that the disturbances in the digestive tract coexisting with achylia and hyperchlorhydria are liable to have an unfavorable influence on the putre-

faction of albumin, although it is impossible to ascribe to the hydrochloric acid any direct disinfecting power beyond the confines of the stomach.

77. **Determination of Albumose in Feces.**—Ury emphasizes the necessity of extracting the substances in the feces which mask the biuret reaction before attempting to determine the albumose. Besides the urobilin, there is a brown pigment which must be eliminated. It is necessary also to extract the substances which respond, themselves, to the biuret test. This includes both urobilin and nucleoproteid and remains of casein. The albumin in solution in diarrheic stools must also be eliminated.

79. **The Sahli Test of Stomach Functions.**—THE JOURNAL has described Sahli's "flour soup" test as a means of determining the state of the gastric functions. (See xxxviii, page 1477.) The present article reports experiences with it in a Vienna clinic. The writers have become convinced that it is too complicated for general use in practice, but that in cases of nervous dyspepsia it may prove of great value. It is especially useful in differentiating atony from alimentary hypersecretion, which it accomplishes with an exactness hitherto unattainable.

Centralblatt f. Bakteriologie, etc., Jena.

Last indexed page 401.

80 (No. 7.) Leproid Affection in Rats. W. K. Stefansky (Odessa).—Eine lepra-ähnliche Erkrankung der Haut und der Lymphdrüsen bei Wanderratten.
81 Ein neuer pathogener Mikrobe zur Gruppe der Diphtherie-Bacillen gehörig: Bacterium muris. E. Klein (London).
82 Length of Life of Typhoid Bacilli Voided in Stools. E. Levy and H. Kayser (Strasburg).—Ueber den Lebensdauer von Typhusbacillen die im Stuhle entleert wurden.
83 Zur Frage der morph. und biol. Charakterisierung des Meningococcus intracellularis. H. Albrecht and A. Ghon.
84 Ueber die literarischen Schicksale des Diplococcus intracellularis meningitide und seine etiologische Bedeutung. A. Weichselbaum (Vienna).
85 3 neue Taenien aus Ceylon. V. Linstow.
86 *Ueber die Bereitung eines antibakteriellen Diphtherie-Serums. Sein prophylaktischer und Heil-Werth. I. Bandi (Sao Paulo, Brazil).
87 Ueber die Specifität der Sero-Diagnostik der Tuberculose. P. Eisenberg and E. Ketter (Paltauf's clinic, Vienna). Conclusions negative.
88 Test of Steam Sterilization Before the Class. C. Eijkman (Utrecht).—Ein Vorlesungsversuch auf dem Gebiete der Dampfsterilisation.
89 Ueber den Desinfections-Werth einiger Formaldehyd-Präparationen. K. Kokubo (Göttingen).
90 Flagella Staining. G. de Rossi (Pisa).—Geisselnfärbung.
91 (No. 8.) Cutaneous Affection of Rats Induced by Acid-Resisting Bacteria. Lydia Rabinowitch.—Ueber eine durch säurefeste Bakterien hervorgerufene Hauterkrankung der Ratten.
92 Study of Virulence of Tubercle Bacilli. E. Krompecher and K. Zimmermann.—Untersuchungen über die Virulenz der aus verschiedener tub. Herden des Menschen reingezüchteten Tuberkel-Bacillen.
93 Immunity to Anthrax. O. Bail (Prague).—Untersuchungen über naturelle und künstliche Milzbranimmunität. (Commenced in No. 5.)
94 Natural Immunity to Anthrax of Dogs and Fowls. A. Petterson (Stockholm).—Ueber die naturelle Milzbrandimmunität des Hundes und des Huhnes.
95 Successful Treatment of Otherwise Fatal Intraperitoneal Streptococcus Infection of Rabbits by Preventive Injections of Pyocyanose-Immun-Proteidin. R. Emmerich and R. Frommsdorff.—Ueber die erfolgreiche Behandlung, etc.
96 *Production of a Bacterial Preparation from Cultures of Tubercle Bacilli. G. Marpmann.—Ueber die Herstellung eines Bakterien-Präparates aus Kulturen von Tub.-Bacillen.
97 Lysoform, Bacillol und Sublamin in wässriger Lösung als Hände-Disinficienten nach Vorbehandlung der Hände mit Alkohol. Engels (Marburg).
98 Die Differential-Diagnose des Typhus-Bacillus vom B. coli auf Grund der Säurebildung (on basis of acid formation). A. Wolff (Königsberg).
99 Züchtung der Trichophytopilze *in situ*. K. Hollborn (Leipsic).
100 Stainability of Streptothrix by Tubercle-Bacilli Technic. E. Fuchs (Prague).—Ueber Färbbarkeit der Streptotrichen nach Methoden der Tub.-Bac.-Farbung.

86. **Anti-Bacterial Diphtheria Serum.**—Bandi believes he has established that the specific bacterial agglutinins of a serum must be regarded as true bactericidal substances. The degree of the agglutination and "sensibilization" is, therefore, the index of the bacterio-toxic action of a specific serum *in vitro*. The specific agglutinating power parallels the phases of the immunizing process against the bacteria, as likewise the sensibilizing power. Tests of the standard diphtheria antitoxin from Paris, Berne and Brussels failed to show any of these specific agglutinating and sensibilizing properties. Bandi reports success in the clinic with an antidiphtheria serum produced with a view to secure as much as possible of these properties. He adds a specific antitoxic serum to cultures of the diphtheria bacilli. The bacilli take up from the serum the substances which are specifically toxic for them. The serum is then centrifugalized out of the culture, and the bacilli thus "sensibilized," as he calls it, are injected into a goat in amounts which would be fatal if they had not been thus previously sensibilized. The injections cause intense phagocytosis and the serum of the animals acquires pronounced specific agglutinating and sensibilizing properties. It has very little antitoxic action, but it is rich in antibodies and has remarkable curative effects. He suggests that a combination of this serum with ordinary antidiphtheria antitoxin might prove useful in practice. His researches were conducted at the Brazilian National Institute of Bacteriology, and he reports in detail 2 out of the 7 cases treated on these principles. The results were so fine that he did not consider it necessary to wait for further experience.

96. **Therapeutic Preparation of Bacteria.**—Marpmann cultivates the tubercle bacilli in milk to procure the specific substances which the bacilli elaborate, and he then administers them by the mouth to tuberculous patients. He gives a cut of the apparatus he has devised for the purpose to allow a constant circulation of air and current in the milk, which becomes entirely impregnated with the bacterial cultures. They are then transferred to a medium, of which he gives the formula, and the bacilli and medium are frozen together, ground and mixed with alcohol. Five drops of the fluid thus obtained are given to the patients three times a day. A number of practitioners are now testing this remedy in their practice, and the results will soon be published in detail.

Deutsche Med. Wochenschrift, Berlin and Leipsic.

101 (XXIX, No. 30.) *Untersuchungen über die bakteriologische Cholera-Diagnostik und Spezificität des Koch'schen Cholera-Vibrio. W. Kolle, E. Gotschlich and others.
102 *Klinisch-hämatologische Mitteilungen. III. Zur Kenntniss der myelogenen Tumoren. E. Bloch.
103 Casuistic Study of Vascular Affections on Nervous Basis. T. L. v. Criegern (Kiel).—Zur Kenntniss der Erkrankungen des Gefässsystems, welche vermuthlich auf nervoser Grundlage entstehen.
104 *Diabetes und Hautkrankheiten (cutaneous affections). E. Saalfeld.
105 (No. 31.) *Beitrag zur Behandlung der Ankylostomiasis. Nagel (Bochum).
106 *Zur Diagnose des Carcinoma ventriculi. H. Salomon (v. Noorden's clinic, Frankfurt a. M.).
107 Ueber Thrombosen und Embolien bei akuter Perityphlitis. Middeldorpf.
108 Zur Pathologie der Hautverbrennungen (burns). G. Scagliosi (Palermo).
109 Study of Percussion of Apex and Spine. B. Alexander.—Ueber die Krönig'schen Schallfelder bei der Lungenspitzen-Tuberkulose und über den Perkussions-Schall der Wirbelsäule.
109½ *Strychnin bei Poliurie und Diabetes insipidus. L. Feilchenfeld.
110 Appeal for Foundation of International Congresses for School Hygiene.—Aufruf, etc.
111 (No. 32.) *Zum klinischen Nachweis des Urobilin. W. Schlesinger.
112 Zur Frage der alimentaren Levulosurie bei Leberkrankheiten. G. Landsberg.
113 Zur Colopexie bei Prolapsus recti (die extraperitoneale Fixation des Darmes). J. Rotter.
114 Abdominal Hysterectomy Plus Vaginectomy for Cancer. W. Heidemann.—Die radikale Entfernung der krebsigen Gebärmutter und Scheide auf abdominalem Wege.
115 Zur Radikal-Operation der Leistenbrüche (of inguinal hernia). T. Honda (Tokio).
116 Zur mikroskopischen Technik. E. Neuhaus.
117 Susceptibility of Useful Mammals for the Tsetse-fly Disease. E. Martino.—Ueber die Empfänglichkeit nützbarer Säugethiere für die Tsetsekrankheit.
118 Einiges von der Anatomie der Araber und der Griechen. M. Simon (Kiel).
119 Thorax-Gurtel (girdle). C. Huetlin (Freiburg i. B.).
120 (No. 33.) *Life-maintaining Action of Stimulus. A. Schücking (Pyrmont).—Ueber die lebenserhaltende Wirkung des Reizes.
121 *Stain Differentiation of Blood Plates. K. Preisich and P. Heim (Budapest).—Durch Färbung lebhaft differenzirte Blutplättchen.
122 The Heidelberg University Centennial. C. Magenau.—Geschichtlicher Rückblick, etc.

101. **Diagnosis of Cholera.**—Kolle remarks that genuine Koch cholera vibriones were found in 59 out of 73 cases of cholera examined last year in Egypt. In 14 the micro-organisms derived differed from them, and possibly the diagnosis may have been erroneous in some. The agglutination test proved again its specificity in more than 1,000 tests with

various combinations of germs and serum made with the true and the false cholera vibriones. He advises eight hours of "peptone water pre-culture" and eight hours of agar plate culture, the agglutination studied in the hanging drop with 80 magnifying power, dilution 1 to 1,000. This allows an exact diagnosis in sixteen hours.

102. **Myelogenic Tumors.**—Bloch relates a case in detail which establishes that it may be possible by examination of the blood to diagnose a myelogenic tumor before any characteristic symptoms have developed. The patient was a man of 41, presenting symptoms suspicious of a neoplasm in the spine. The abundance of myelocytes found in the blood indicated that the bone marrow was under the influence of some irritation. The spleen was unusually large and soft, and there was fever. The necropsy revealed a spindle-celled sarcoma originating in the vertebræ. Bloch describes several other cases with unusual and interesting blood findings.

104. **Diabetes and Cutaneous Affections.**—Saalfeld's experience emphasizes the importance of combining both general and local treatment in case of this association of diabetes and skin disease. In 2 instances the latter developed first as a premonitory symptom of the diabetes. One was a case of acne necrotisans corporis, the other pruritus scroti. He found that ordinary skin diseases in diabetics, rebellious to the usual measures, yielded to them after constitutional treatment had been instituted. He had this experience in several cases of eczema, pediculosis pubis, acne rosacea, lichen ruber, ulcus molle, ulcus cruris, etc. When these affections proved intractable he found that change to an antidiabetic diet was soon followed by a cure of the skin lesions. This was also peculiarly his experience with pruritus, and to such an extent that he now examines the urine as a routine measure in every case from the start. He never found glycosuria associated with psoriasis or leucoplakia oris, but mentions that neuralgic pains were exceptionally severe in his diabetic patients.

105. **Treatment of Ankylostomiasis.**—Nagel practices at Bochum, a hotbed for this affection; 4,000 patients have been treated in the hospital since '96. Kraft has been able to isolate from ext. filicis a non-toxic essential principle which Nagel believes to be the true effective worm-expelling element. He calls it "filmaron" and reports that it is proving in the clinic all that had been anticipated for it, succeeding in 9 cases after failure of extractum filicis. His experience suggests that the male fern does not kill the worm but merely benumbs it, and that the following purgative is the real expelling force. Ankylostomiasis is spreading in the mines of the region as the miners know of cases of sudden blindness that have followed treatment, and shrink from applying to a physician. Nagel himself has observed 2 such cases, the robust men becoming totally blind after ingestion of 10 gm. of extractum filicis in one or two doses. The discovery of the non-toxic, effective element in the drug, therefore, is of great importance.

106. **Albumin Test in Diagnosis of Cancer of Stomach.**—Salomon's test is based on the exudation of serum from any cut or ulcerating surface. He prepares the patient for the test by giving fluid food only, free from albumin, such as coffee, wine, bouillon, tea, the day beforehand. At 9 p. m. the stomach is rinsed until the rinsing water returns clear, and the patient is warned not to eat anything more. The next morning 400 c.c. of normal salt solution is poured into the stomach and then siphoned out and poured in again and siphoned out once more, to give the stomach as thorough a rinsing as possible. The siphoned-out fluid is then tested for nitrogen by the Kjehldahl method, and the Esbach test for albumin applied. He reports experiences with 22 patients, which showed that the Esbach test was negative in 6 cases of gastric catarrh, or only faintly positive; absolutely negative in 5 of nervous dyspepsia, and negative or faintly positive in cases of other gastric affections, with the exception of cancer. In 8 cases of carcinoma of the stomach the Esbach findings were decidedly positive, showing the presence of 1/16 to 1/2 per 1,000 of albumin in every case. He thinks that a negative reaction may aid in excluding cancer in dubious cases, to say the least, and that a marked positive reaction under certain restrictions may confirm the diagnosis. The nitrogen was also more abundant in the cancer cases, ranging from 10 to 70 mg. in 100 c.c. of fluid. When the siphoned-out fluid shows a flaky turbidness or the nitrogen is over 20 mg. in 100 c.c., cancer may be suspected.

109½. **Reduction of Polyuria by Strychnin Hypodermically.**—Feilchenfeld announces that a daily injection of .005 gm. strychnin nitrate proved effectual in reducing the amount of urine in a severe case of polyuria and one of diabetes insipidus in his experience. The urine dropped from 3,200 gm. to 1,400. The specific gravity does not seem to be altered, and this, with the promptness of the response, impels him to ascribe the action of strychnin in these cases to an influence on the central nervous system.

111. **Clinical Tests for Urobilin.**—Schlesinger reports from Nothnagel's clinic that it is possible to obtain fluorescence from urobilin in urine and distinct bands in the spectrum if an equal amount of a 10 per cent. alcoholic solution of zinc acetate is added to the urine and the precipitate filtered out. Usually this fluorescence and the spectrum bands are masked by the presence and action of other pigments, but by this procedure even a very small proportion of urobilin with large proportions of the other pigments responds perfectly to the test. Hemoglobin disturbs the reaction and the technic must be modified for blood. For this he measures 1.5 c.c. of a .7 per cent. saline solution and adds enough potassium oxalate so that when the same amount of blood is added a 1 per 1,000 solution of the oxalate results (.5 potassium oxalate to 200 saline solution), then adding 1.5 c.c. blood drawn fresh from the finger. The oxalate prevents the coagulation of the blood without disturbing the reaction. The tube is then centrifugalized, the clear fluid decanted and poured into the same amount of the alcoholic zinc acetate and centrifugalized again. The supernatant fluid is then examined for fluorescence and the spectrum bands.

120. **Life-Maintaining Action of Stimulus.**—Schücking, in continuing his researches on the eggs of the starfish and other echinoderms, has found that stimuli of various kinds are able to confer greater resisting power on the cell, enabling it to survive the action of substances which destroy the control cells. The shriveling of the living protoplasm in hyperisotonic solutions he believes to be a process independent of osmosis, a reaction of the living substance. He has become convinced that the cell is able to regulate its intake and outgo of water independently of the osmotic differences of normal metabolism. His experiments with chemical, electric, mechanical and other stimuli are described in detail.

121. **Stain Differentiation of Blood-Plates.**—Preisich and Heim exhibited at the meeting of the local medical society, March 28, a number of stained specimens of blood-plates which show them up in a new light. They followed the Romanowski technic, slightly modified, and claim to have established with it that the blood-plates are nucleated formations of the red corpuscles thrown out by the latter into the circulating blood. They frequently found the red-stained blood-plates inside the blue-stained red corpuscles. In morbid processes accompanied by much regeneration of the red corpuscles, the number of blood-plates was correspondingly increased, while it was low in pernicious anemia. They also found blood-plates occasionally inside the phagocytes. The granulations of the latter may be merely the granulations left from phagocyted blood-plates. In size, staining reaction and other points they seem to be identical with the granulations of the blood-plates.

Muenchener Med. Wochenschrift, Munich.

123 (L, No. 29.) Physiologic Bases of Iodipin Treatment. H. Winternitz (Halle).
124 Das kolloidale Bismut-Oxyd bei den Verdauungsstörungen im Säuglingsalter (digestive disturbances in infancy). Kinner.
125 Zur Kasuistik der essentiellen Nierenblutung (renal hemorrhage). P. Wulff.
126 Rubber Gloves. A. Hammesfahr.—Die Gummihandschuhe bei aseptischen Operationen.
127 Toxin and Antitoxin. *Max Gruber and v. Pirquet.* (Commenced in No. 28.)
128 Fat Substance of Yeast in Therapeutics. E. Roos and O. Hinsburg.—Eine therap. wirksame Substanz aus der Hefe, Cerolin, Fettsubstanz der Hefe.

129 (No. 30.) *Ueber Albuminurie bei Aorten-Klappen-Insuffizienz. W. v. Leube (Würzburg).
130 Study of Intussusception. H. Schridde.—Eine nach Ausstossung des Intussuszeptums spontan geheilte Invagination des Ileums. Zugleich ein Beitrag zur Frage der Entstehung und Entwicklung der Intussuszeption.
131 Monocular Predominance in Binocular Vision. O. Rosenbach. —Ueber monok. Vorherrschaft beim binok. Sehen.
132 Eine neue Bäderform in Bad Nauheim. T. Groedel II.
133 *Eine neue Operation zur Behandlung veralteter Kniescheibenbrüche (of old fractures of patella). A. Schanz.
134 Adrenalin gegen Darm-Blutung bei Typhus. Graeser.
135 Study of Intestinal Origin of Tuberculosis. E. Nebelthau. (Commenced in No. 29.)
136 (No. 31.) *Frequency of Joint Affections in Hereditary Syphilis. E. v. Hippel.—Ueber die Häufigkeit von Gelenkerkrankungen bei hereditär Syphilitischen.
137 *Zur hereditären Spatsyphilis (tardy syphilis). Jordan (Heidelberg).
138 *Study of Inheritance of Syphilis. v. Düring.—Einige Fragen aus der Lehre von der Vererbung der Syphilis.
139 Pyrogallic Acid in *Lupus of Nasal Mucosa.* Wittmaack (Breslau).—Behandlung des Schleimhautlupus der Nase mit Pyrogallussaure.
140 *Outlining Heart Limits with the Phonendoscope. F. Moritz. —Ueber die Bestimmung der Herzgrenzen nach Smith mittels des Phonendoskopes.
141 *Zur Aetiologie der Gastritis phlegmonosa. C. Klieneberger.
142 *Ueber gonorrhoisch-metastatische Entzündung der Augen Erwachsener (eye affections in adults). W. Apetz (Würzburg).
143 *Killing of Tubercle Bacilli in Heated Milk. W. Rullmann.—Ueber die Abtötung von Tub.-Bazillen in erhitzter Milch.
144 Five Grandmothers Who Nurse Their Grandchildren. F. Siegert (Strasburg).—Grossmütter, die ihre Enkel stillen.
145 Ein neues Pupillometer. Bumke (Freiburg a. B.).
146 Eine Irrigator-Spritze (syringe). F. Kuhn (Cassel).
147 Zur Kenntnis der Landry'schen Paralyse. Rolly (Leipsic). (Commenced in No. 30.)

129. **Albuminuria with Insufficiency of Aortic Valve.**—A young man with the clinical picture of insufficiency of the semilunar valves, exhibited likewise symptoms of connective tissue induration of the kidneys. The necropsy showed similar induration in liver and spleen, while the lungs were exempt. The case demonstrates that in case of insufficiency of the aortic valves, albuminuria may be observed, not only as an expression of venous congestion in the kidneys, long before any other signs of this congestion are apparent, but also as a manifestation of general atheromatosis in its most restricted sense—the same affection which develops primarily in elderly subjects, but which in these conditions is the direct result of the valvular affection. The maximal increase in the blood pressure and its fluctuations in the vessels and capillaries in the kidneys, entail a thickening of their walls and a proliferation of connective tissue in their vicinity. The induration in the kidney may be regarded as arterial induration in contrast to cyanotic induration. As the circulation in the organ suffers, albumin and later even tube casts may be found in the urine. The date of the appearance of the induration and albuminuria depends on the intensity and duration of the valvular affection.

133. **Transplantation of Sartorius in Old Fractures of Patella.**—Schanz has treated a case of old fracture of the patella with an unsurmountable gap, by digging a continuous groove in both fragments and transplanting into this groove the isolated sartorius muscle, suturing it in place with wire. He asserts that by this method it is possible to restore function to old fractured patellas, no matter how wide the gap. If there is the slightest tendency to the formation of a fibrous callus the joint need not be opened at all. Another advantage of the measure is that the quadriceps is strengthened and the disposition to atrophy averted.

136. **Joint Affections in Hereditary Syphilis.**—Hippel affirms that joint affections are frequent in hereditary syphilis, and especially among those subjects who were not treated with mercury in childhood. Hence they are often observed in subjects presenting keratitis, as these are mainly recruited from this class. In 56 per cent. of 77 patients with syphilitic keratitis in his practice since 1885, he was able to discover some joint affection, and in nearly every instance it had preceded the ocular affection. In several cases its syphilitic nature had been unsuspected, and it had been treated by eminent surgeons on some other basis. The functional disturbance was generally slight, and only in a few instances was the subject confined to bed. The knee was almost invariably the joint affected, sometimes accompanied by swelling of the elbow, wrist or finger joints. The prompt benefit derived from potassium iodid differentiates these cases. He examined a number of non-syphilitic eye patients and found that joint affections were rare among them, while in his total of 85 cases of keratitis in syphilitics, the joints were or had been affected in 47. The joint affection is usually merely a serous or sero-fibrinous effusion in the knee, bilateral, without preceding trauma and generally without fever; causes remarkably slight subjective disturbances and usually heals in time without permanent functional derangement.

137. **Tardy Hereditary Syphilis.**—Jordan publishes an account of a case of tardy congenital lues in a young soldier, localized solely in the knees. The success of treatment confirmed his diagnosis of miliary gummata in the synovialis. He adds a second case, a child with a gonitis proceeding from the knee joint and associated with keratitis parenchymatosa. He adds that in all cases of mild bilateral knee affections in children or adults a dubious diagnosis may be cleared up by instituting specific treatment. It must be energetic and long continued to effect a cure in these hereditary cases.

138. ***Inheritance of Syphilis.***—It is possible, von Düring reasons, that syphilitic infection may occur and its manifestations remain limited for a time to interstitial inflammation of the internal organs, escaping our diagnosis. Such a latent syphilis would explain the cases of tardy hereditary syphilis and also the syphilis of apparently sound mothers of children with hereditary syphilis. Matzenauer believes that the mother of every child that proves to have an inheritance of syphilis must herself be infected, and should receive specific treatment irrespective of the apparent soundness of her health. He rejects the idea of spermatic infection, and thinks that if the placenta is sound the children will be free from syphilis. These views require confirmation, and it is important that family physicians should aid specialists in this research, following for years both mothers and children in these puzzling cases. Examination of the placenta is particularly important from this point of view, and study to determine the specific alterations in the placenta, and whether it is possible that the fetal or maternal portion might be alone involved. For the present the burning question is as to whether the apparently healthy mothers of syphilitic children are actually sound or are they infected.

140. **Outlining the Heart with the Phonendoscope.**—Moritz has repeated Smith's examination of the heart with the phonendoscope, but his findings do not agree with those obtained by Smith. He gives numerous cuts to show that it is physically impossible for the latter to be correct.

141. **Etiology of Gastritis Phlegmonosa.**—Gastritis phlegmonosa occurs most frequently in men, and besides excesses, trauma, intoxication and irritating food as the cause, it may be due to the invasion of the submucosa of the stomach by pus cocci. There are 67 cases on record and Klieneberger now reports another. He attributes the etiology in this case to the simultaneous administration of potassium iodid and calomel to a patient, a man of 67, suffering from acute exacerbation of chronic bronchitis, with emphysema. He had never presented any symptoms of gastric derangement and he took only 3.5 gm. of the potassium iodid in all. It was suspended as symptoms of iodin intoxication developed, including severe gastric disturbances. Eight hours after the last dose of the iodid .3 gm. of calomel was given. The patient died in thirty-six hours, and at the autopsy diffuse phlegmonous gastritis was discovered.

142. **Gonorrheal Affections of the Eyes in *Adults*.**—The case described was distinguished by the metastatic affection in the eyes after six years of latency, and simultaneous involvement of all the joints and the tendon sheaths of one foot.

143. **Fate of Tubercle Bacilli in Heated Milk.**—Rullmann announces that tubercle bacilli heated in milk to 65 C. (150 F.) for more than thirty minutes, were still virulent enough to infect guinea-pigs in intraperitoneal inoculation. The milk was infected with sputa.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

PRACTICAL MEDICINE SERIES OF YEAR BOOKS. Comprising Ten Volumes of the Year's Progress in Medicine and Surgery. Under the Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Postgraduate Medical School. Volume VIII. Materia Medica and Therapeutics, Preventive Medicine, Climatology, Suggestive Therapeutics and Forensic Medicine. Edited by George F. Butler, Ph.G., M.D.; Henry B. Favill, A.B., M.D.; Norman Bridge, A.M., M.D.; Daniel R. Brower, M.D., and Harold N. Moyer, M.D. Cloth. Pp. 326. Price, $1.50. Chicago: The Year Book Publishers. July, 1903.

QUANTITATIVE CHEMICAL ANALYSIS. Adapted for Use in the Laboratories of Colleges and Schools. By Frank Clowes, D.Sc. Lond., Emeritus Professor of Chemistry in the University College, Nottingham, and S. Bernard Coleman, A.R.C.Sc. Dublin, Professor of Chemistry in the Southwestern Polytechnic, Chelsea, S. W. Sixth Edition. Cloth. Pp. 602. Price, $3.50 net. Philadelphia: P. Blakiston's Son & Co. 1903.

TREASURY DEPARTMENT. Public Health and Marine-Hospital Service of the United States. Hygienic Laboratory—Bulletin No. 15. Inefficiency of Ferrous Sulphate as an Antiseptic and Germicide. By Allan J. McLaughlin. Paper. Pp. 7. Washington: Government Printing Office. 1903.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. Army, under orders from the Adjutant-General's Office, Washington, D. C., for the week ending Saturday, Aug. 29, 1903:

Heizmann, Charles L., colonel and assistant surgeon-general, and Major William H. Arthur, surgeon, are detailed as members of the board of medical officers appointed by paragraph 26, S. O. 65, March 19, 1903, A. G. O., for the examination of candidates for admission to the medical corps of the Army, vice Brigadier-General Calvin DeWitt, U. S. A., retired, and Major Louis A. La Garde, surgeon, relieved.

McCulloch, Jr., C. C., captain and asst.-surgeon, in addition to his present duties as attending surgeon and examiner of recruits in New York City, is assigned to duty as medical superintendent of the transport service in that city.

Porter, R. S., first lieut., is detailed as a member of the examining board at Fort Leavenworth, vice First Lieut. W. M. Smart.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending Aug. 29, 1903:

Asst.Surgeon E. M. Brown, detached from the Naval Hospital, Newport, and ordered to the *New York*.

Surgeon M. S. Elliott, detached from the *New York* and ordered home to wait orders.

Surgeon N. H. Drake, detached from the *New York* and ordered to the *Maine*.

Surgeon D. O. Lewis, ordered to the *New York* as fleet surgeon of the Pacific Squadron.

P. A. Surgeon H. C. Curl, detached from the Naval Hospital, Mare Island, Cal., and ordered to the *New York*.

Surgeon W. R. DuBose, detached from the *Maine* and ordered to duty in the Bureau of Medicine and Surgery.

Surgeon J. F. Murphy, detached from the *Monocacy* and ordered to the *Wisconsin*.

Asst.-Surgeon J. C. Thompson, detached from the *Chesapeake* and ordered to the Naval Academy.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Aug. 20, 1903:

Surgeon C. E. Banks, granted three days' leave of absence from August 8, under paragraph 189 of the Regulations.

Surgeon D. A. Carmichael, Bureau order of Aug. 10, 1903, directing him to report to director of laboratory for special instructions, amended so that he shall report at the laboratory for temporary duty.

P. A. Surgeon J. C. Perry, relieved from temporary duty in the Bureau and directed to report to the director of the laboratory for duty.

P. A. Surgeon M. J. Rosenau, granted leave of absence for seven days from August 19.

P. A. Surgeon J. A. Nydegger, granted leave of absence for one month from August 13 on account of sickness.

P. A. Surgeon H. W. Wickes, leave of absence for one day granted by Bureau telegram of August 13 revoked.

P. A. Surgeon H. B. Parker, relieved from special temporary duty at Vera Cruz, Mexico, to date from July 22. Granted leave of absence for seven days from August 19.

Asst.-Surgeon T. B. McClintic, to report to director of the laboratory for duty, to take effect Aug. 1, 1903.

Asst.-Surgeon C. W. Wille, relieved from duty at the laboratory, to take effect August 3. Detailed as inspector of unserviceable property at Baltimore.

A. A. Surgeon J. M. Delgado, granted extension of leave of absence for seven days from August 12.

A. A. Surgeon J. P. C. Foster, granted leave of absence for seven days from August 19.

A. A. Surgeon C. M. Frissell, Department letter of Aug. 6, 1903, granting him leave of absence from August 6 to 18, amended to read from August 10 to 25.

A. A. Surgeon F. J. Schug, granted leave of absence for ten days from August 15.

A. A. Surgeon A. E. Spohn, granted leave of absence from July 26 for thirty days.

APPOINTMENTS.

Jamin H. Hamilton, appointed acting assistant surgeon for duty at Richford, Vt.

Stacy D. Williamson, appointed acting assistant surgeon for duty at Malone, N. Y.

PROMOTIONS.

Asst.-Surgeons L. D. Fricks, V. G. Heiser and M. J. White commissioned (recess) as passed assistant surgeons, to rank as such from Aug. 2, 3 and 4, respectively, 1903.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the weeks ended Aug. 22 and 29, 1903:

SMALLPOX—UNITED STATES.

California: Los Angeles, Aug. 8-15, 1 case; Sacramento, Aug. 1-8, 1 case; San Francisco, Aug. 2-16, 3 cases.

Colorado: Denver, July 11-25, 10 cases.

Illinois: Belleville, Aug. 15-22, 1 case; Chicago, Aug. 1-8, 15-22, 28 cases, 2 deaths.

Louisiana: New Orleans, Aug. 15-22, 1 case, imported.

Massachusetts: Fall River, Aug. 8-22, 9 cases; Taunton, Aug. 1-8, 15-22, 5 cases.

Michigan: Detroit, Aug. 8-15, 1 death; Grand Rapids, Aug. 15-22, 1 case; Port Huron, Aug. 8-22, 3 cases.

Minnesota: Minneapolis, July 27-Aug. 3, 1 case; in 7 counties at 11 localities, 29 cases, 1 death.

Missouri: St. Louis, Aug. 15-22, 4 cases.

Nebraska: Omaha, Aug. 8-15, 2 cases.

New Jersey: Hudson County, Aug. 16-23, 1 case.

Ohio: Cleveland, Aug. 8-15, 1 case; Dayton, Aug. 8-22, 3 cases; Hamilton, July 11-18, 1 case, should have been reported July 6; Toledo, Aug. 8-15, 1 case.

Pennsylvania: Allegheny, Aug. 10-17, 2 cases; Pittsburg, July 25-Aug. 15, 135 cases, 31 deaths, 1 case imported; Scranton, Aug. 8-15, 1 case.

West Virginia: Wheeling, June 1-30, 9 cases, 3 deaths.

Wisconsin: Milwaukee, Aug. 1-8, 3 cases.

SMALLPOX—FOREIGN.

Austria: Prague, July 18-Aug. 8, 8 cases.

Belgium: Antwerp, July 26-Aug. 8, 5 cases, 2 deaths; Brussels, July 26-Aug. 8, 3 deaths.

Brazil: Rio de Janeiro, July 12-26, 13 deaths.

Chile: Amtofogasta, June 1-30, 5 cases, 3 deaths.

China: Shanghai, July 7-14, 1 case, 1 death.

Colombia: Bocas del Toro, July 28-Aug. 4, 1 death.

Germany: Bremen, July 26-Aug. 1, 1 case, 1 death, emigrant.

Great Britain: Birmingham, July 26-Aug. 8, 3 cases, 1 death; Dublin, July 26-Aug. 15, 1 case, 1 death; Dundee, July 18-Aug. 8, 4 cases; Leeds, July 26-Aug. 8, 11 cases, 3 deaths; Liverpool, Aug. 1-15, 13 cases, 3 deaths; London, July 26-Aug. 8, 4 cases; Manchester, July 26-Aug. 8, 4 cases, 1 death; Newcastle-on-Tyne, July 19-Aug. 8, 13 cases, 3 deaths; Nottingham, July 25-Aug. 1, 6 cases; Sheffield, July 26-Aug. 8, 3 cases.

India: Bombay, July 1-28, 24 deaths; Calcutta, July 11-18, 2 deaths.

Mexico: City of Mexico, July 18-Aug. 16, 36 cases, 17 deaths; Hermosillo, Aug. 11, epidemic; Magdalena, Aug. 11, epidemic; Tegucigalpa, Aug. 15, present.

Russia: Moscow, July 18-Aug. 1, 4 cases, 2 deaths; Odessa, July 26-Aug. 1, 1 case; St. Petersburg, July 18-Aug. 1, 10 cases, 2 deaths; Warsaw, June 20-July 18, 8 deaths.

Turkey: Smyrna, June 21-July 19, 16 deaths.

SMALLPOX—INSULAR.

Philippine Islands: Manila, June 13-July 11, 9 cases.

YELLOW FEVER.

Brazil: Rio de Janeiro, July 12-26, 4 deaths.

Colombia: Panama, Aug. 3-17, 6 cases, 2 deaths.

Costa Rica: Limon, July 30-Aug. 13, 3 cases, 4 deaths.

Ecuador: Guayaquil, July 18-25, 1 death, sporadic.

Mexico: City of Mexico, Aug. 8-16, 1 case, 1 death; Linares, Aug. 26, epidemic; Merida, Aug. 1-12, 10 cases, 5 deaths; Tampico, Aug. 8-15, 14 cases; Vera Cruz, Aug. 8-15, 53 cases, 15 deaths.

CHOLERA—INSULAR.

Philippine Islands: Manila, June 20-July 11, 21 cases, 17 deaths; Provinces, June 20-July 11, 1,486 cases, 1,003 deaths.

CHOLERA—FOREIGN.

China: Hongkong, July 8-15, 1 death.

India: Bombay, July 14-28, 2 deaths; Calcutta, July 11-25, 39 deaths.

Straits Settlements: Singapore, June 20-July 4, 3 deaths.

PLAGUE—INSULAR.

Philippine Islands: Manila, June 13-July 11, 19 deaths.

PLAGUE—FOREIGN.

Africa: Cape Colony, June 20-27, 5 cases.

Brazil: Rio de Janeiro, July 12-26, 2 deaths.

Egypt: General, July 11-18, 27 cases, 9 deaths.

China: Amoy, June 11-18, 840 deaths, estimated; Funchau, July 8-15, becoming epidemic; Hongkong, July 8 27, 87 cases, 64 deaths.

India: Bombay, July 14-28, 143 deaths; Calcutta, July 11-25, 17 cases; Karachi, July 12-26, 2 cases, 1 death.

Mexico: Bagio, Aug. 17, 3 cases; Sequeros, Aug. 18, 3 cases.

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Original Articles.

THE SUBCUTANEOUS INJECTION OF PARAFFIN FOR THE CORRECTION OF DEFORMITIES OF THE NOSE.*

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The surgical use of paraffin as a prosthetic measure is a recent advancement in the surgical art and consequently is in a more or less experimental stage of development. The first instance in which it was used in an attempt to remedy a defect in the human anatomy dates back but a few years, and while the number of cases in the literature is increasing rapidly, they are still so few in number that every operation of this character should be reported. It is only by a careful classification and study of a large number of cases that we may be enabled to arrive at a definite conclusion as to the merits and demerits of the method, as a recognized surgical procedure.

The attempts at improvement which terminate unsatisfactorily are of even more import than are the cases which result favorably. The temptation is to report the successful operations and to postpone indefinitely a report of those cases which had an unfavorable outcome, in this way giving to the one searching for a verdict on the method, a biased conception as to the results one may reasonably anticipate.

The satisfactory results are sufficient evidence in themselves. The failures demand further attention and investigation both from the operator and the profession at large, in an attempt to discover the cause of the fault, and to place it at the door of the method, or of the one who employs the method.

The report of disastrous results should not be confined to the lay press but should appear at length in the medical press, and in this way tend toward the prevention of a repetition of the failure. Not long ago the daily papers, through a press dispatch from Paris, called attention to the case of a young girl who, not satisfied with the appearance of her nose, submitted to an operation in which paraffin was injected subcutaneously to replace a defect, as a result necrosis ensued and the loss of the entire nasal organ was threatened.

Cases such as this demand the most careful scrutiny on the part of the profession before an attempt at a decision as to the value of the new method can be made, and these cases should be brought to the attention of the profession by the one who had the case in charge.

THE ORIGIN OF THE METHOD.

The subcutaneous injection of oils and liquid paraffin dates back almost to the origin of the hypodermic needle and syringe; especially has it been used in the treatment of syphilis, as a vehicle for the suspension of insoluble medicaments. Corning in 1891 presented an article entitled, "Localization of Remedies About the Sensory Nerves of the Skin," in which we find the first use of a solidifying oil in surgery. As the title implies, the object of this method was to fix medicament, usually an analgesic, in a particular neighborhood by the injection of the oil immediately after, and through the same needle, and then by a cold application, or the refrigerant spray, the oil was solidified, and the absorption or dissemination of the drug prevented.

In 1894 Corning enlarged the application of this subcutaneous injection of paraffin, by its injection into a muscle for the arrest of spasm. This was accomplished with a satisfactory result and the name "Eleomyenchysis" applied to the procedure. The same investigator, in 1896, utilized this substance in still another manner. After the subcutaneous division of a nerve for neuralgia, paraffin was inserted between the two divided ends, and then solidified by the external application of cold. Regeneration of the nerve ends and the return of pain were in this manner prevented.

The *Medical Record*, in an editorial on this phase of the subject, concludes as follows: "It is clear that the credit for the idea of the mechanical employment of oils in the tissues belongs wholly to Dr. Corning. And not only is he entitled to the honor of originating the principle, but also to credit for developing a method far more scientific than that of any of his followers."

From a survey of the available literature it would seem positively proven that, as quoted above, the principle of the subcutaneous injection of paraffin was first utilized by Corning, but also that Gersuny in his article of 1900 entitled, "Ueber eine Subcutane Prosthese," was undoubtedly the first to recommend the use of, and to use, paraffin, subcutaneously, as a prosthetic measure.

The fact that paraffin or vaselin can be sterilized, made to melt at a given temperature, and when injected under the skin, will give rise to no untoward symptoms, no toxic absorption, no marked inflammatory reaction, and no pain or discomfort, but instead serve as a non-irritating framework which acts as a support of newly formed connective tissue—these facts form the basis, the foundation of all that has been done with paraffin as a prosthetic substance during the past few years, and it would seem that this was first brought out by Corning of New York, and then re-emphasized and enlarged by Gersuny of Vienna, so much so that the procedure is commonly known as "Gersuny's Method."

The writings of Gersuny and his assistants have led surgeons throughout the land to utilize this substance in efforts to repair, or improve on, defects in the human anatomy. These defects have been of a great variety and include almost every possible sort of deficiency, defect or blemish which human flesh and bone is heir to. The first instance in which it was used in the human body was for the formation of artificial testicles in a person who had been castrated for tuberculosis of those organs. This was successfully accomplished by Gersuny in 1899, and at the last report, after the elapse of over three years, the artificial testicles were in perfect condition, and, to the palpating fingers, felt like cartilaginous masses. This, notwithstanding the fact that the patient had passed through a severe attack of typhoid fever, his temperature rising to 40 C. (104 F.). At the time of this high temperature, the masses of paraffin within the scrotum were noted as becoming a little softer, but after the decline of the temperature, they returned to their former consistency.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. A. J. Ochsner, J. E. Moore and De Forest Willard.

FIELD OF EMPLOYMENT.

Among the other conditions in which this method has been employed might be mentioned inguinal and umbilical hernia, incontinence of urine, incontinence of feces, prolapse of rectum, prolapsus ani of children, prolapse of uterus, displacement of uterus, cleft palate, partial and complete, prevention of post-operative adhesions, obliteration of scars resulting from accident, obliteration of scars resulting from mastoid or frontal sinus operation, obliteration of scars resulting from confluent smallpox, to restore the symmetry of the face in facial hemiatrophy, to restore the symmetry of the face after the removal of maxillæ, as a foundation for an artificial eye, to repair the defect after resection of the ribs, to prevent ankylosis of joints after resection, to prevent regeneration of nerves after resection and the formation of artificial turbinated bones.

The above are among the more usual indications for the employment of this method; while the most frequent defects for which the subcutaneous injection of paraffin has been resorted to, if one may judge from the literature, are deformities of the nose.

It would also seem, from the literature, that in but one deformity of the nose has repair been attempted by this procedure. That is the "saddle-back" nose. This may be, and in all probability is because it is by far the most common deformity of the nose, in which there exists a defect which may be filled in. Of course in that variety of malformation in which there is an increase of tissue, this method will, as a general proposition, be contraindicated.

CLASSIFICATION OF NASAL DEFORMITIES.

Roe has classified nasal deformities as follows:

Deformities of the nose	Bony portion..	Vertical...	Convex.
			Concave.
		Lateral..	Spatulated.
			Deflected.
	Cartilaginous portion.	Tip	Excessive or deficient tissue
			Deviation from median line.
		Wings .	Collapsed.
			Expanded.

From this classification, it will be seen that in a fair proportion of the various deformities it is both practical and possible to remedy the defect by the subcutaneous injection of paraffin; and not only remedy the defect, but in addition, do so in a manner much better and more rapidly, and with considerable less inconvenience, to both operator and patient, than by means of any other known method at our disposal for the remedy or improvement of such condition.

The most satisfactory results, the extreme simplicity of the procedure, and the rapidity with which the irregularity is corrected are all more pronounced when compared or contrasted with the more unsatisfactory, complicated, and time-consuming (both to the patient and the operator) methods previously advocated, such as the so-called plastic operations, and in the methods which include the insertion of a foreign substance such as metal, celluloid, or ivory plates or strips.

Of those deformities included in Roe's classifications, the concave vertical or the saddle-back nose is beyond all doubt the condition *par excellence* for the employment of this procedure.

Among the other deformities of the bony portion of the nose, this line of treatment is not at all constantly indicated, but cases might arise in which the spatulated or deflected lateral variety of nasal deformity could be made less noticeable, by the use of this foreign body inserted subcutaneously. In the convex vertical, where there is a redundancy of tissue, there seems to be practically no indication for its use.

As to the cartilaginous portion, when the tip is deficient in size, this method will be again found to be available in improving the appearance of the organ. When of excessive size, and when deviated from the median line, there is little, if anything, to be gained by using the method under discussion. When the wings are collapsed we have found the method satisfactory in causing the alæ to resume their relatively normal position and appearance. And with the wings expanded, it is again found to be of no practical value. This review of the possibilities of the procedure will show a very wide field for its usefulness, and serve as a satisfactory excuse for its serious consideration.

INDICATIONS.

On account of the character of the work involved, the method must be proven to be absolutely harmless, devoid of any possible danger when properly applied, before it should or can become a recognized surgical procedure. The operations in which this method will be employed are not, as a rule, matters of necessity, and when performed, in an attempt to remedy a slight defect in a person's countenance, a defect often exaggerated in the mind of the patient applying for improvement, one must be reasonably, if not absolutely, certain that this defect will not be, by any chance, made worse than it was originally. Very frequently the irregularity of the face is such that, to an uninterested person, it would seem that the deformity had better be left alone.

The fact that a patient comes to you to have his or her appearance improved on, is certain evidence, or at least satisfactory evidence, in the vast majority of instances, that he or she is hypersensitive about the matter, and is more than likely to be dissatisfied with the result of your attempted improvement, even though it be satisfactory from a surgical view point. Such cases differ and should be differentiated from those in which the nature of the defect demands that some measure, operative or otherwise, be taken in order to prevent that person from becoming an object of either pity or ridicule throughout the remainder of his days, if no attempt at improvement is undertaken. In such cases it is always justifiable to make an attempt at improvement of the existing conditions. In another class of cases, those in which the deformity is comparatively trifling, in many instances it is not indicated nor justifiable to operate on them.

THE DIFFICULTIES.

The possible causes of failure, in the latter class of cases especially, should always be most fully and carefully presented to the patient, and then it is for him to decide whether or not to undertake the risks, as there is always a risk associated with the performance of an operation of this character.

These possible sources of failure, and therefore objections to the method, many of them chimerical, some theoretical, and others real and existing, may be enumerated as follows:

1. Toxic absorption.
2. Marked inflammatory reaction.
3. Loss of tissue, due to infection and abscess formation.
4. Pressure necrosis, caused by the injection of too much paraffin.
5. Sloughing of tissue, as a result of the heat of the paraffin.
6. Injection into very dense, or inelastic structures, or where scar tissue is firmly attached to the underlying and adjacent parts.
7. Injection of too small an amount of paraffin, with an insufficient correction of the deformity.
8. Injection of too large an amount of paraffin, with an overcorrection of the original deformity.
9. Air embolism.
10. Paraffin embolism.
11. Extension of the paraffin, when first introduced, into adjacent normal structures, such as the infraorbital region.
12. Interference with the muscular action of the nose.
13. Escape of the liquid paraffin, after the withdrawal of the needle.
14. Solidification of the paraffin in the needle, which renders the injection difficult, and causes injudicious expedition on the part of the operator.
15. Absorption or disintegration of the paraffin.
16. The difficulty of procuring paraffin with the proper melting point.
17. A resultant hypersensitiveness of the skin over the injected area.
18. A marked and more or less permanent redness of the skin over the injected area.

These, the more important objections, will be taken up seriatim and considered more or less at length, as may be required in each instance.

INTOXICATION.

1. The danger of an intoxication due to the absorption of paraffin was one of the first objections raised against the method; but it is now generally conceded that when such symptoms occur they are due to some impurity of the substance injected. Meyer was the first to emphasize this objectionable point, and his position was corroborated by the animal experiments of Straume, Dunbar, Stubenrath, and Sobieranski. These men injected paraffin in the lower animals, and for some reason procured a decided constitutional reaction, which they attributed to the toxic qualities of the foreign substance.

On the other hand, the experiments of Stein and of Smith demonstrate that this injection may be, and in their experience was, followed by no reaction, either constitutional or local. Jukuff made similar experiments, and concludes that the amount of paraffin injected subcutaneously, necessary to produce toxic symptoms, must be equivalent to 10 per cent. of the body weight of the animal into which it is injected. Granting the accuracy of his experiments, it would place the dangerous amount in the neighborhood of from ten to fifteen pounds, a quantity greatly in excess of the maximum dose employed in prosthetic surgery. These latter experiments, with the more convincing and constantly increasing number of satisfactory cases on the human being, have led to the belief that the experiments first cited were imperfect in some respect, either in an impurity of the injected substance or some error in the technic employed, and that there is no danger of any toxic absorption in the method.

REACTION.

2. A mild transitory inflammatory reaction usually occurs after the injection. A marked inflammatory reaction has been noted in but very few of the reported cases, and in these was usually due to avoidable and extraneous causes. The mild reaction that does take place before the encapsulation occurs is seldom of sufficient severity to warrant its being classed as inflammation.

INFECTION AND NECROSIS.

3. Infection followed by abscess formation, and, in consequence, a loss of tissue, can not be reasonably held against the method, but rather against the technic used in employing the method. This danger, infection, is no greater after this procedure than following the ordinary usage of the hypodermic syringe, which in proper and competent hands is practically *nil*.

4. The pressure necrosis that may be caused by the introduction of too large an amount of paraffin, is one of the most dangerous, humiliating and aggravating outcomes that may follow the use of this method, and it undoubtedly has occurred in a certain proportion of the cases. With the surgeon carefully molding the mass with the fingers of the left hand, as the paraffin is being introduced, in this manner being all of the time cognizant of the amount of pressure that is being exerted on the overlying skin, such an accident should rarely, if ever, occur. The circulation should always be perfect over the injected mass immediately after the conclusion of the operation. This can readily be determined by noting the return of the blood to this area after a local ischemia has been produced by digital pressure.

5. Sloughing of the skin has been noticed in cases where the harder paraffins have been used—those with a high melting point (59 to 65 C., 136 to 149 F). This is one of the objections raised to the use of the harder paraffins by those who employ that with a lower melting point. It is not rational to presume that such an occurrence would take place after the injection of paraffin with a melting point of 110 F.

6. In cases where the tissue covering the defect is very firmly attached to the underlying structures, and when it is necessary to inject into a very dense and inelastic tissue, the danger of sloughing is considerably greater. In order to reduce this danger, under the first circumstance it is advisable to detach the cicatricial tissue in some manner, before the injection, preferably by means of a subcutaneous incision. In the latter instance, it has been recommended that the injection of the paraffin be preceded by the injection of Schleich's solution into the area that the paraffin is to occupy. This would serve the double purpose of anesthetization and of dilating the tissue in preparation for the paraffin soon to follow.

Injection into this class of tissues was not originally intended, and is not to be enthusiastically recommended, even though a number of instances in which it has been successfully carried out have been reported.

ERRORS OF TECHNIC.

7 and 8. The introduction of too large or too small an amount of the substance is an error of technic and within the control of the operator. The latter is a comparatively slight fault, if one at all, and can be easily remedied by a subsequent injection. It is, indeed, a preferable manner of dealing with these conditions. It has been recommended that

a small amount each time, instead of attempting to remedy the entire defect at a single sitting. In this way one obviates the danger of making too large an injection. Freeman has noted a confusing amount of edema occurring very rapidly, which makes it sometimes difficult to accurately estimate the amount of paraffin needed; at a second step of the operation the further requirements can be more accurately determined. Other advantages of this operating in stages are that, at the second sitting, there exists a more substantial basis to work on, i. e., the previously injected material. The skin is given an opportunity to gradually stretch and accommodate itself to the new state of affairs without any undue or hazardous tension.

The introduction of too large an amount of paraffin is an extremely difficult matter to remedy, hence great care should be exercised in attempting to prevent such an occurrence. The best treatment of this condition is prophylactic, i. e., as cited above, numerous injections of small amounts in preference to single injections intended to remedy the entire fault. Paraffin, while soluble in a number of substances, such as ether, chloroform, xylol, benzine, etc., can not be acted on by these through the skin.

Smith reports one case in which it was necessary to remove some of the injected paraffin. He made a subcutaneous opening and endeavored to curette some of it away, but found that it had become so intimately embedded in the tissue that it was impossible to remove it without removing a large amount of newly formed connective tissue as well.

EMBOLISM.

9. Air embolism is a very slight danger in all cases in which a subcutaneous injection is made, but can be readily excluded by taking the precaution to expel all the air in the needle and syringe before introducing the needle beneath the skin—the same as is done every day before hypodermic injections are made, i. e., hold the syringe erect, allow the air to come to the top, and then press on the piston till the air is forced out and the fluid escapes at the tip of the needle. But that this danger of air embolism is greatly exaggerated can be readily seen by referring to the experimental works of Senn and of Hare and also by the absence of symptoms of air embolism, after hasty and careless subcutaneous injections.

10. The introduction of paraffin into a vein, either directly or indirectly, and lung embolism as a result, is one of the most serious and consistent of the objections which have been raised against this line of treatment. Consistent, in that such cases have been reported by Pfannenstiel, Leiser and others, showing that the objection is not without foundation in fact. It is a fault which bears with equal force in any method of subcutaneous injection of a solid, semisolid or liquid, insoluble substance.

In Pfannenstiel's case, in which there was injected 30 c.c. of paraffin at the melting point of 45 C. (113 F.), the injection was followed by the typical symptoms of embolism, as described by the syphilographers, that has followed the injection of mercurials in oil, such as cough, chill, headache, vomiting, increased respiration and later dyspnea and cyanosis. The symptoms are usually very mild, death very rarely, if ever, occurring from this cause alone. In Pfannenstiel's case, the symptoms persisted for about one week and then gradually subsided with recovery of the patient.

Attention has been called, in this connection, to the experience of the dermatologists, with embolism after the injection of mercurial preparations suspended in liquid oils or paraffins. And from a review of the literature on that subject it would seem that embolism is far more likely to follow the parenchymatous than the subcutaneous injection, but in neither is it absolutely excluded, but apparently present in a small percentage of all the cases so treated.

This radical difference is to be noted between the injection of the liquid oil, as is done in treating syphilis, and the method under consideration. In the former the substance is in a fluid state, therefore absorption and emboli are more likely to occur than in the latter, where the injected substance is semisolid. With the injection of paraffin that emerges from the needle, as a worm-like string, and not in a fluid state, it seems that the danger of embolism may be very materially diminished, if not excluded. Comstock says: "In all cases in which paraffin was used at 102 F. the animals died within two weeks' time; hence the specimens at that temperature are limited (death being caused by thrombosis). . . . In all other cases, with the higher melting point, 110 F., no unpleasant results were experienced whatever."

Explanations of the accident in Pfannenstiel's case have been offered, such as: The temperature of the paraffin was too high, consequently it was injected hot and liquid, thus favoring absorption; or, the high temperature caused a coagulation of the blood in the veins, in this manner favoring the occurrence of thrombosis and embolism. Again, it has been said that so large an amount of paraffin, at so low a temperature, could not possibly harden when under the skin for some little time after the operation, and in this way make possible the occurrence of absorption and embolism. Other explanations are: That the injection was made parenchymatously instead of subcutaneously; that the injection might have been made directly into a vein.

For the prevention of embolism, it has been recommended that the injection be made into the subcutaneous tissue only and never into the parenchyma and that paraffin be utilized that has a melting point neither too high nor too low, this being best determined by seeing that the paraffin emerges from the needle, at the room temperature, in a worm-like string.

Stein says that all that is necessary to avoid pulmonary embolism is to avoid the pricking of a vein, and recommends that only subcutaneous injections be made, and that the needle be first inserted, and only after it has been demonstrated that no blood flows through it, should the syringe be attached.

Freeman says: "This danger may, perhaps, be avoided by using a blunt-pointed needle, after having first punctured the skin with a sharp one."

Paget advocates the application of a firm and close pressure all around the nose during the injection. Jukuff of Strausburg found unfavorable or fatal results experimentally, after the injection of over one-tenth of the body weight of the animal, or when the injected paraffin had a melting point below the temperature of the body. In the later instance, the autopsy invariably disclosed thrombosis in many of the smaller veins, and embolism of the lungs. Comstock concludes that paraffin must be used where it will be at all times above the temperature of the body, in order to prevent any danger from embolism.

UNDUE SPREADING OF THE PARAFFIN.

11. The paraffin, when first introduced under the skin, may extend to regions of the face that are normal, and not in need of this artificial substance Such an exten-

sion to the loose areolar tissue of the infraorbital regions while injecting for the repair of a saddle-back nose is not uncommon. Such accidents are due to a hyperinjection, and care should be exercised, and only a proper amount of paraffin introduced.

Firm digital pressure around the nose, made by an assistant, may prevent such an occurrence. Paget states that this firm digital pressure may be helped by the use of a strip of lead or pewter beneath the fingers. Downie recommends the use of celloidin, as follows: Fifteen minutes before the injection he paints a band of celloidin (collodion will answer the same purpose) across the nose at the level of the eyes, and down each side of the nose, at the junction with the cheeks; this contracts and helps to prevent the paraffin from passing into the cellular tissue beneath the eyes. Immobility of the parts, and the local application of ice or cold, have been advocated as aiding in the more rapid setting of the mass, and in this way preventing its extravasation into undesirable parts.

12. Alter has called attention to a paralysis of the muscular action of the wings of the nose, resulting in impeded nasal respiration. He states that the current of air rushing into and through the nose carries with it an inherent tendency to draw the alæ septalward; this, however, in normal conditions is counteracted by the action of the dilators of the alæ nasi, viz., dilator naris posterior, dilator naris anterior, pyramidalis nasi, and the levator labii superioris alæque nasi. The modus operandi of this interference with the action of these muscles, according to Alter, is by compression, the presence of the paraffin interfering mechanically with their free muscular action, resulting in collapse or inward drawing of the wings of the nose during inspiration. He cites one case in which this interference with inspiration was very marked, after the injection of the paraffin.

As a preventive measure against such an occurrence, he recommends that an assistant make firm pressure on the wings of the nose, by placing a thumb in each nostril, and the making of counter-pressure on the outside with the index finger, this pressure being maintained until the nose has been molded into its proper shape.

13. There is but little danger that any of the paraffin will escape between the time of the withdrawal of the needle and the sealing of the wound puncture with collodion, if it is injected while in a semisolid state, as it should be. But it has been suggested that a piece of gauze soaked in ice water be placed over the nose before the withdrawal of the needle, and so hasten the setting of the paraffin and preventing its escape at the time of the withdrawal of the needle.

THE SYRINGE TO BE EMPLOYED.

14. Another annoying feature is the setting or the solidification of the paraffin in the needle before the injection is made, necessitating undue haste in the operation or great difficulty and force in the injection. To obviate this it has been recommended that the syringe be kept in a receptacle of hot water after being filled and until ready for use; or, a fine wire, such as is to be found in hypodermic cases, may be inserted into the needle to remove the obstruction. Downie winds the outside of the needle with a fine platinum wire, which is then kept hot by being connected with a storage battery. Eckstein places a rubber tubing over the syringe to keep in the heat. Karewski of Berlin has invented a syringe for this purpose, surrounded by a jacket through which circulates a continuous current of hot water.

In the writer's opinion, the best method to prevent this aggravating delay in the technic is by the employment of a syringe similar to the one described by Smith, and also used by Leonard Freeman, i. e., one in which the piston rod is surrounded by a coarse screw worm, and fitted on this rod is a metal thumb screw, which runs up and down, and is made to screw into the upper end of the cylinder of the syringe, at the volition of the operator. When the thumb screw is not fitted into the cylinder the piston works up and down, as in an ordinary syringe, and any liquid can be drawn up and expelled readily by manipulation of the piston; but when the thumb screw is put into place it becomes necessary to screw the piston down, and by so doing the paraffin is slowly and evenly ejected from the needle. By using a syringe of this character the necessity of an embarrassing haste and of a force, hard to apply, is dispensed with.

Before becoming familiar with the construction of such a special syringe the writer had improvised one by using the ordinary syringe with a screw worm on the piston rod, and on this screw a plate, which can be made to run up and down the piston rod. By a simple mechanism this nut or plate was fixed in place at the top of the cylinder of the syringe so that it could not turn. By screwing the piston rod we arrived at the same result as is achieved by the special syringe; that is, a uniform and steady pressure, with an equal and even advance of the paraffin, resulting in a regular and continuous, smooth emptying of the barrel of the syringe.

ABSORPTION OF THE PARAFFIN.

15. The point has been raised that the paraffin will serve as a temporary support only and soon disappear; that it will become absorbed or disintegrated. According to Gersuny, the mass of paraffin is not taken up by the lymphatics, but remains as an inert non-irritating body which soon becomes encapsulated and is subdivided by an ingrowth of newly formed connective tissue; the mass of paraffin finally becomes very finely divided and partially emulsified. These finely divided particles of the substance are first seen at the periphery of the mass and finally are absorbed, their place being by this time taken by new connective tissue, which gradually becomes harder, until it closely approaches the consistency of cartilage. This same chain of events has been noted, experimentally, by Juckuff.

This theory as to the ultimate destiny of the paraffin seems to be corroborated, and to coincide with the facts, in Smith's case, in which he endeavored to remove some part of the injected paraffin a number of months after the injection, and found that the greater part of it had become so intimately embedded in the meshes of the newly-formed connective tissue that it was almost impossible to remove the paraffin without also removing considerable of the connective tissue. Regarding this question, Stein believes that it is reabsorbed little by little, and replaced by connective tissue, so that the persistency of the plastic result is assured. And what confirms him in this opinion is that, whatever be the melting point of the paraffin—and it may vary considerably—the consistency of the nodule augments or diminishes by degrees, according to the case, so that at the end of a month or so, it is always perceptibly analogous to cartilage.

Freeman says encapsulation soon takes place, just as it does with a bullet or any other foreign body. A limited amount of connective tissue also penetrates the material, which is speedily converted into a solid cartilage-like mass.

Kramer has used melted agar-agar in subcutaneous injection for the production of connective tissue artificially, and has made interesting experiments on animals. On microscopic examination of the substance at different times he finds that the mass of agar at first becomes infiltrated with round cells, and that then these are replaced by vascularized connective tissue.

Comstock presents a most thorough and valuable work on the injection of paraffin, experimentally. He has made a most comprehensive study of the histologic and pathologic changes in the tissues of the body, and of the changes in the substance itself, after varying lengths of time and after the utilization of paraffins having different melting points. His conclusion is as follows: "In paraffin we have a substance that will fill in spaces of lost tissue, and not remain entirely a capsulated foreign body, but become a bridge work and, in fact, a part of the new tissue."

Downie injected some paraffin into a female breast one week prior to the amputation of that structure for malignant disease. After the removal of the breast, sections were made and examined. The paraffin was found in masses of various size located between collections of adipose vesicles, which were displaced by them. He infers that the paraffin had made its way along the lines of connective tissue trabeculæ, between the fat-containing cells. It is difficult for him to believe that the position of the paraffin would subsequently alter, to any extent, although its absorption seems quite possible.

Gersuny's first case was performed in May, 1899, and in the last report of that case, after a lapse of three years, there was noticeable no diminution in the size of the prosthesis.

This, with the other cases and experiments, would seem to indicate that if the paraffin is absorbed it is replaced by connective tissue, or if absorbed and not replaced by new tissue, it is absorbed so very slowly as to have no practical bearing on the advisability of operating by this method.

Granting that the prosthesis will gradually become smaller in time, from absorption or any other cause, repeated injections may be made at intervals, as the case may require, with but a small part of the inconvenience to the patient, as that which would accompany any of the so-called plastic operations in vogue before the introduction of the injection method, or, in the majority of cases, with less discomfort than will be associated with the persistency of the original deformity.

PREPARATION OF THE PARAFFIN.

16. To obtain a paraffin that has the proper melting point is something of a time-consuming and tedious procedure. The ordinary soft paraffin has a melting point of about 120 F., and this must be mixed with the white cosmolin, or vaselin, of commerce, which melts at about 100 F. The mixture is heated and its melting point determined by the following procedure, as recommended by Gersuny: The bulb of a clinical thermometer is coated with the mixed paraffins, and placed in a water bath, which is slowly heated until the paraffin melts and floats on the surface of the water; the heat is then removed, and the temperature of the cooling water noted, when the transparent drops of paraffin become opaque once more. If this temperature is not the desired one, the process must be repeated, after a recombination of the two paraffins, with the addition of more soft, if the melting point is too high, or the addition of more hard, if it is too low.

This tedious and objectionable experimenting in order to procure the proper mixture of paraffins has been rendered unnecessary by Dr. Harmon Smith of New York, who has had a paraffin prepared with the proper melting point in sterile sealed test tubes, and for sale in the market. It is advisable, as a regular procedure, to resterilize this commercial article by heating before using it. The paraffin prepared by Smith has a melting point of 110 F.

This brings us to a discussion of the question as to the proper melting point of paraffin intended for subcutaneous injection. Here we find considerable variance of opinion. Moszkowicz, Gersuny's assistant, states that the paraffin must have a melting point between 36 and 40 C. (97-104 F.). In speaking of Pfannenstiel's case, Moszkowicz said: "He injected paraffin with a melting point of 45 C., which is much too high." Parker utilized a paraffin with a melting point of 102 F. Leonard Freeman uses a paraffin that melts in the neighborhood of 40 C., 104 F. In Downie's cases the melting point varied from 104 to 108 F. Paget at first used a paraffin that melted at 136 F., then later one that melts at 115 F., and still later a mixture that melts at 111 F.

In the vast majority of the instances in which the method has been employed, the melting point has been in the neighborhood of 110 F. A higher melting point has been recommended and advocated strenuously by Eckstein, Karewski and others, the former placing the best point of liquidation between 56 and 58 C. (133 to 136 F.), and the other saying that the melting point should not be below 57 or 60 C. (134 to 140 F.). Paget says: "I am absolutely sure now that Eckstein's paraffin is without any real advantage. It is very difficult to handle, it sets very rapidly, it causes a gread deal of swelling and some inflammation, and may even produce some discoloration of the skin, and it yields no better results then does Pfannenstiel's paraffin, which melts at 115 F."

Comstock, after experimenting on animals with this point in view, says: "Paraffin must be used where it will be at all time above the body temperature." He also says: "In selecting the melting temperature point for surgical uses, allowance will have to be made for the difference in temperature between the rabbit and human species, which is about 4 F., making a choice of 106 or 107 F., the best for use in subcutaneous injections, for the reason that it gives a substance firm enough to hold very well its form, especially when confined by the surrounding tissue, and at the same time with a melting point out of the reach of the system at all times."

Some of the objections entered against the use of the harder paraffins are: Difficulty in manipulation at the time of the operation; heat and hardness, which are liable to favor the occurrence of irritation, inflammation or even necrosis; its liquid state at the time of the injection, which makes its localization more difficult and uncertain and which makes the formation of emboli possible. Paget calls attention to the fact that when the paraffin "sets" it shrinks, and the harder the paraffin the greater the shrinkage. Those preferring the use of the harder paraffin reply by stating that the softer mixtures, because of the longer time required for them to set, are more liable to extravasate, are less durable and permanent, and are more liable to form emboli.

Disregarding these theoretical points, from the literature, one must be convinced that the melting point most generally used is one between 105 and 115 F., though satisfactory results are not lacking in which paraffins of a higher melting point have been used.

SENSITIVENESS AND REDNESS OF THE SKIN.

17. A resultant hypersensitiveness of the skin over the injected area is a theoretical objection that has been

raised against this method of treatment, but which has not materialized in any of the available reported cases. There has been, in many cases, a slight painfulness, or rather a sense of fulness or distension, for a short time after the operation, and in some few cases a more marked painfulness existed for a longer time, but this invariably soon passes away and the sensation remains perfectly normal in every respect.

18. A redness of the skin over the injected area has been noted by many operators, but it has always been transitory in the reports of cases that have come under the writer's observation. Paget says: "In a few cases —but only in a few—some reddening of the skin has followed the injection, and in a very few this has been very slow to fade." These few cases occurred in a series of twenty-two cases, and we are not told whether it occurred more frequently after the injection of the paraffin with the high or the low melting point.

In one of the six injections reported with this small contribution to the subject, it will be found that this redness resulted and has been present for over a year, and during that time has diminished very little.

This resulting redness of the skin is the only objection of the many sources of failure or objections herein cited that I have found existent in my very limited experience.

(*The conclusion of this article will appear next week with an article on the same subject by Dr. Harmon Smith.*)

PRECISION IN THE DETERMINATION OF HUMAN PARASITES.[*]

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The ectoparasites of man are, generally speaking, well known, and many of them have been recognized from the earliest times. They are also easily determined, in the main, while, on the other hand, the difficulties to which they give rise are not, as a rule, serious, but yield readily to simple treatment. With the endoparasites, however, the case is precisely the reverse. They are not, as a rule, more than superficially known, and it is only recently that attention has been generally called to their number and the effects often serious which they produce in the human organism.

To be sure, a long series of such forms has been recorded in the past, and the serious effects of their parasitism has been emphasized in some quarters. Thirty years ago Leuckart[1] listed thirty-three species which had been found in man, and, in company with Virchow and a long list of other investigators, called repeated attention to the deleterious effect certain species exert. Braun's more recent work[2] discusses of certain and doubtful species 15 *Trematoda*, 20 *Cestoda* and 38 *Nematoda*, besides 30 to 40 *Protozoa*, which have been recorded from the human host. In studies on the various groups which I have recently published[3] this list is increased by two species, although the interval between the publication of Braun's lists and mine is not a year.

The various studies, however, have chiefly been made on forms found in the old world. Within very recent times these studies have begun to be extended over other lands. All the new forms recorded during the last five years have been extra-European, either new species peculiar to other lands, or new regions within which known forms have been found to exist. Perhaps the greatest advance has been in knowledge of the geographical distribution of human parasites. The large number of isolated cases of the occurrence of certain species has been supplemented by other cases showing more general occurrence or wider distribution, the results of which have been to demonstrate that these parasites are far more common and widely distributed than was believed heretofore. The accompanying table, which lists all human parasites of the various groups of worms heretofore recorded with a statement of the regions in which they are known to occur, will be of value as indicating the present knowledge on the subject. It has seemed to me best to confine the list to the worms, and to exclude the protozoan parasites for the double reason that the latter are very imperfectly known, and it would be difficult to present a satisfactory list, and, in the second place, that they are also more difficult to determine, even by the professional microscopist, and present insuperable difficulties to the ordinary practitioner.

It may be confessed at the outset that the table is probably incomplete. The individual records are much scattered, and in such form as to demand extensive critical editing. It would be improbable, then, that, even with the great care which has been exercised, all records should have been included. So far as the list concerns Europe and the United States, however, I think it may be said that it is most nearly complete, and includes all but the most obscure records up to the present date. It should nevertheless be borne in mind that one may certainly expect further evidence of the presence of some of these species in unrecorded regions and of the existence of new species in most of the regions of the world. Additional strength is given to this general premise by the discoveries which have been made within the past decade in these United States. Thus Thayer has demonstrated the existence here of the Indo-European *Strongyloides stercoralis*. White has discovered the Asiatic *Opisthorchis sinensis*, I have found the Asiatic lung fluke, *Paragonimus Westermanii*, and a new human tapeworm, *Tænia confusa*, while Stiles, in addition to records on the vinegar eel, *Anguillula aceti*, and other forms new as human parasites here, has contributed the most important of all these studies, namely, that on the widespread occurrence of a new hook-worm, *Uncinaria americana*, which is of great etiologic significance over large areas of our country.[4]

In the belief of the medical profession 200 years ago there was no disease, real or imaginary, which was not due to the presence and effect of some kind of parasite. Each ailment had its particular "worm" in its characteristic location. This was a direct result of the endeavor to reduce every malady to some definite cause, and from a joining of the unknown sickness with the parasites, of which they knew as little. Under the influence of study and of increase of knowledge regarding the parasites, such a theory was seen to be untenable, and the movement in the opposite direction began—a tendency which may be said by this time to have passed its height. In fact, there has prevailed during recent years among the medical men of this country an exaggerated idea of the unimportance of human parasites. It has been very generally maintained that the country was less infested than the old world, or that the forms, after all, were of little significance in the etiology of disease. I am of the opinion that the discoveries referred to furnish ample grounds for a modification of the position of indifference heretofore assumed, and in the treatment of disease call for more careful consideration of such forms as possible factors of etiologic significance. The clinical importance of parasites is generally recognized in such cases as bothriocephalus anemia, of which only a very few instances are on record in the United States, but similar significance has not been accorded to most forms.

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[*] Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Pathology and Physiology, and approved for publication by the *Executive Committee*: Drs. L. Hektoen, F. B. Wynn and W. S. Hall.

[1] Leuckart, R.: Die Parasiten des Menschen, 2 vols., Leipzig, 1876.

[2] Braun, M.: Die tierischen Parasiten des Menschen, 3 Aufl., Leipzig, 1902.

[3] Ward, H. B.: Cestoda, Nematoda, Protozoa, Trematoda, Wood's Reference Handbook of Medical Sciences, Revised edition.

[4] Stiles, C. W.: The Significance of Recent Cases of Hookworm Disease, Eighteenth Annual Report, Bureau of Animal Industry

Recent studies, however, have demonstrated the presence of hemoglobin in the alimentary canal of many nematode parasites, the pathologic effect of whose activities must be counted much more important than heretofore estimated by reason of this blood-sucking habit. Thus in cases of uncinariasis the amount of blood lost from myriads of minute hemorrhages imparts a char-

Parasite. (Scientific Name.)	Found as Human Parasite in		Type of Parasitism.	Recorded Frequency as Human Parasite.	Geographical Distribution.					
	Stage of Parasite.	Organ of Host.			Europe.	Asia.	Africa.	North America.	South America.	Australia.
Trematoda (flukes).										
Gastrodiscus hominis	Adult	Colon	Occasional	Twice		†				
Fasciola hepatica	"	Liver	"	Rare	†	§		§	§	§
Fasciola angusta	"	?	?	Once			§		‡?	
Fasciolopsis buski	"	Intestine	Normal	Rare		*				
Fasciolopsis rathouisi	"	"	Occasional	Once		†				
Paragonimus westermanii	"	Lung	Normal	Abundant	§	*		§		
Opisthorchis felineus	"	Liver	"	Frequent	†	†		§		
Opisthorchis sinensis	"	"	"	"		*		‡		
Opisthorchis noverca	"	"	Occasional ?	Once		†				
Metorchis truncatus	"	"	Occasional	" ?		†				
Heterophyes heterophyes	"	Intestine	Normal	Frequent		§	*			
Dicrocoelium lanceatum	"	Liver	Occasional	Rare	†	§	†	§	§	§
[illegible] hæmatobium	"	Portal vein	Normal	Frequent	‡	‡	*	‡		
[illegible]										
Dibothriocephalus latus	Adult	Intestine	Normal	Abundant	*	*	†	‡		
Dibothriocephalus cordatus	"	"	Occasional	Rare	†			†		
Diplogonoporus grandis	"	"	"	"		*				
Bothriocephalus mansoni	Larva	Connective tissue	"	"		†				
Dipylidium caninum	Adult	Intestine	"	"	†			†		
Hymenolepis nana	"	"	Normal ?	Frequent	†	†	†	†?	†	
Hymenolepis diminuta	"	"	Occasional	Rare	†			†	†	
Hymenolepis lanceolata	"	"	"	Once	†					
Davainea madagascariensis	"	"	"	Rare		†	†		†	
Davainea(?) asiatica	"	"	?	Once		†				
Tænia solium	{ Adult	Intestine	Normal	Abundant	†	†	†	†		
Cysticercus cellulosæ	} Larva	Connective tissue	Occasional	Rare	*			†		
Tænia saginata	Adult	Intestine	Normal	Abundant	†	†	†	†		
Tænia marginata	Larva	Connective tissue	?	Once ?				†?		
Tænia serrata	Adult	Intestine	Occasional	Twice ?			†?			
Tænia africana	"	"	Normal ?	Once			†			
Tænia confusa	"	"	" ?	Twice				†		
Tænia echinococcus (Echinococcus polymorphus)	Larva	Connective tissue	Normal	Frequent	*			†		†
Tænia hominis	Adult	Intestine	?	Once		†				
Nematoda (round worms).										
Leptodera pellio	Adult	Vagina	Accidental	Once	†					
Leptodera niellyi	Larva	Skin	Accidental ?	"	†					
Anguillula aceti	Adult	Bladder	Accidental	Rare				†		
Strongyloides stercoralis	"	Intestine	Normal	Abundant	†	*	*	†	†	
Gnathostoma siamense	"	Skin	Occasional	Once		†				
Filaria medinensis	"	"	Normal	Abundant	‡	*	*	‡	‡	
Filaria loa	"	Eye	"	Frequent	‡		*	‡	‡	
Filaria volvulus	"	Lymph vessels	Normal ?	Rare	‡	†?	*			
Filaria conjunctivæ	"	Conjunctiva	Occasional	"	†					
Filaria lentis	Young	Eye	?	Uncertain	?	?				
Filaria restiformis	Adult	Bladder ?	?	Once				†		
Filaria hominis oris	?	?	?	"				†		
Filaria labialis	?	Lip	?	"	†					
Filaria lymphatica	Adult	Lymph vessels	Occasional ?	Twice		†				
Filaria immitis	?	?	?	Uncertain	†?	§		§	§	
Filaria bancrofti	{ Adult } Larva	Lymph vessels Blood	Normal "	Abundant } Frequent }	†?	*	*	†	†?	†
Filaria magalhaesi	{ Adult } Larva	Heart Blood	Normal ?	Rare					†	
Filaria perstans	{ Adult } Larva	Connective tissue Blood	" ?	Once	‡		*		†?	
Filaria diurna	Larva	"	Normal	Frequent			†			
Filaria demarquayi	"	"	Normal ?	Rare				†		
Filaria romanorum-orientalis	Adult	"	?	Once	†					
Filaria ozzardi	{ Adult ? } Larva	Connective tissue Blood	Normal ?	Rare					†	
Filaria kilimaræ	Adult	Body cavity	?	Once			†			
Trichuris trichiura	"	Colon	Normal	Abundant	†	*	†	†		†
Trichinella spiralis	{ Adult } Larva	Intestine Muscle	" "	" "	†	†	†	†	†	†
Strongylus apri	Adult	Lung	Occasional	Rare	†					
Strongylus subtilis	"	Stomach	Normal ?	Twice		†	†			
Dioctophyme renale	"	Kidney	Occasional	Rare	†			§	§	
Uncinaria duodenalis	{ Adult } Larva	Intestine Connective tissue	Normal "	Abundant "	†	†	†	†	†?	
Uncinaria americana	Adult	Intestine	"	"		†		*	†?	
Physaloptera caucasica	"	"	?	Once		†				
Ascaris lumbricoides	"	"	Normal	Abundant	†	†	†	†		
Ascaris canis	"	"	Occasional	Rare	†			†		
Ascaris maritima	" ?	?	?	Once				†		
Oxyuris vermicularis	"	Intestine	Normal	Abundant	†	†	†	†		
Gigantorhynchus gigas	"	"	Occasional	Rare	†?			§		
Gigantorhynchus moniliformis	"	"	"	"	†					
Echinorhynchus hominis	"	"	?	Once	†					

Explanation of signs.—* Recorded from man; autochthonous to region. † Recorded from man; probably endemic, though often secondarily. ‡ Recorded from man; probably acquired elsewhere. § Recorded from some other host, hence possible in man. ? Record open to question.

acteristic reddish brown color to the feces, the intestinal wall becomes seriously affected, and affords places of easy attack for any pathogenic germs which may be present. This indirect damage may be very serious in the individual instance, and may include primarily or secondarily undesirable regressive or progressive histologic changes, inflammatory processes and disturbances in the circulation.

Another source of danger from parasites is one which has long been surmised, but only recently demonstrated. A number of investigators have shown that various *Cestoda, Acanthocephala* and *Eunematoda* contain definite poisons (toxins) which, when extracted and employed, experimentally, affect particularly the nervous system and the formation of blood. The continued formation and giving off of such a substance would explain the apparently excessive results of parasitism in some instances, results which are shown prominently in reflex nervous symptoms. In a certain proportion of cases, pernicious anemia is the result of this toxic effect, and is accompanied by a mortality of 17 per cent., according to one report regarding *Bothriocephalus.* Whether the poison is elaborated by the parasite, or is produced by pathologic processes in the worm, or by its death, as well as the ground for the variability in the toxic action of different specimens, are questions as yet undecided. It has been shown, however, that the extracts from different species of helminths vary considerably in toxic power. Vaullegeard has isolated two toxic principles, one of which acts on nerve centers and the other on muscles, and many symptoms, produced experimentally by the injection of these substances, are analogous to those manifested in parasitic disease. According to this chemical theory, the troubles caused by parasites are due to the formation of toxic substances more rapidly than their elimination of the host, and their consequent accumulation in the system. A striking instance of the actual effects of parasitism on a large scale is set forth by Stiles[4] in his description of the general anemic condition and the lowered physical and mental vitality of the families and communities where *Uncinaria americana* is common. These considerations are sufficient to show the greater numbers and more serious effects of human parasites in our own country than has been conceded hitherto.

In the next place it is necessary to emphasize the importance of the accurate identification of human parasites. They are by no means all of equal etiologic rank; some are known to exert deleterious effects on the human organism, regarding the action of some much doubt exists, and there are others which are believed to be indifferent to man. Furthermore, even of those whose injurious effects are unquestioned, the results on the hosts differ notably, and the line of successful treatment differs equally. It is evidently important, then, to determine accurately with what species the practitioner has to deal in the individual instance. To-day no one would be satisfied to accept the diagnosis of "fever." and how can the diagnosis of "worms" be regarded as more sufficient?

In reaching a precise determination, the physician has to deal usually with what is purely a microscopic question. The data which are essential are obtainable only by the use of the microscope, and yet they are very easily secured. They do not involve any complicated technic or the use of high powers. and a series of time-consuming cultures is entirely unnecessary. The determination is most readily made from fresh material, and, while it should be repeated several times in order to exclude all possibility of deception or accident, it requires only a brief time and the use of comparatively low magnification. A consideration of the factors involved will make the matter clearer.

Evidence of the presence of parasites will ordinarily be obtained by an examination of the blood, sputum, urine or feces. The first three are very frequently examined in the diagnosis of disease, and, as a matter of fact, they rarely furnish evidence of parasitism. So far as I have been able to learn, fecal examinations are rarely made, and yet by them evidence of parasitism would be most largely furnished.

By means of such examination one finds sometimes specimens of the entire adult parasite; again, recognizable fragments of the same, its embryos, or its eggs. It is comparatively rarely that one encounters specimens of the entire parasite, and unless the latter is very abundant, such specimens may easily be overlooked if not of such size as to be readily visible to the naked eye.

The identification of the parasite by some recognizable fragment of the body is regularly made only in the case of the tapeworm, which is determined by the passing of segments or proglottids at stools. While the precise determination of the species of tapeworm from the separate proglottids is often a matter of more difficulty than ordinarily believed, the cases of confusion resulting therefrom are not such as to introduce any difficulties in the accepted treatment. In passing, it may be noted, however, that the determination of tapeworm proglottids as flukes on account of their active independent movements is a frequent error. The examination of such structures, even with a hand lens, will show the absence of features characteristic of the flukes.

The determination of embryos is not attended with difficulties, so far as the different groups are concerned. The individual species of *Filaria* have been but little studied, and are imperfectly known. These forms are probably rare in our fauna, unless it be in the Southern states, and methods of coping with them are yet to be worked out.

It is ordinarily with the eggs of parasites, if found at all, that the greatest difficulties in precise determination are experienced. This is, in large part, due to the inaccurate and insufficient knowledge concerning them. A comparison of the original sources with various manuals shows that serious errors in measurement have crept in and that mention of important and characteristic peculiarities has often been omitted. I have, accordingly, published elsewhere[5] a critical review of these features, with illustrations to which those interested may be referred for details. Here it is possible to review only certain general features.

The eggs of parasites may be distinguished on the basis of form, size, texture and other individual peculiarities. Any one of these elements is usually insufficient for specific distinction; but, with the exception of a few forms of rare occurrence which are imperfectly known, the group of characters enables one to make a determination. In reaching a decision, the observer should, however, keep in mind certain general points. In the case of tapeworm eggs, there are sometimes external membranes of a deciduous or variable character. Their presence in an extended or in a shrunken condition, or their absence, may alter greatly the external appearance of the eggs; the appearance and size of the inner membrane and of the included embryo are, however, relatively constant. The eggs of flukes and of round worms have only a single firm shell of chitinous character, and are in color usually a faint yellowish-brown, varying to darker brown. As the shell is firm, it can not be materially modified in size by pressure, although since the increase in width is relatively much greater, the proportions are noticeably altered. All eggs are not mathematically uniform in size; the range of variation is in most cases small, and the average readily obtained by measuring ten or a dozen specimens taken at random. The same comparison of a number of specimens will serve to eliminate abnormalities of the individual egg and to give a correct idea of the typical structure.

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[5] Ward, H. B.: Data for the Determination of Human Parasites, Trans. Amer. Micros. Soc., vol. xxiv, 1903.

It is necessary now to call attention to possible results of the examination in the way of non-agreement of the forms discovered with the data at present known regarding human parasites. Such non-agreement may, of course, point to the discovery of a form new to the world, and most frequently has resulted in the description of the form under these conditions as a new species which has been duly baptized. Unfortunately, there are two other possibilities which are more frequently met with than the one just cited, and a disregard of them has led to great confusion. It may be, in the first place, that the species is new to the human host, but is one which is known from some other host. It, consequently, should not receive a new name, but should be discussed merely in the light of its occurrence under these conditions heretofore unknown. Such a species may be normal to the human host as well as to that from which it was previously known, but a considerable range of cases must be brought forward in order to demonstrate this fact. When only a single case of the occurrence of the parasite is determined, such new forms fall more frequently into the categories known as occasional parasites, and accidental parasites.

One may recognize among human parasites those which occur in their normal host, but in an unusual location, like the brain cysticerci; there are also many of the species listed which can not be regarded in any way as characteristic of the human host. Such are the occasional parasites which are species of true parasitic habit and able to attain normal development in the human host, but ordinarily not finding conditions favorable for their introduction. As an instance of such species may be mentioned *Fasciola hepatica,* the common liver fluke of the sheep, which in many regions of the world is extraordinarily abundant. That it can thrive in the human system is demonstrated by the score or more of definitely recorded cases of its occurrence there, but its infrequence is equal evidence of a general immunity on the part of man, lacking in these particular cases, or of some special feature in its life history which makes the infection of the human host difficult. That the latter is the probable explanation may be inferred from the fact that the cercaria larva, liberated from the intermediate host, encysts on plants and, hence, could only reach the human alimentary canal under unusual circumstances. Similar examples may be taken from other groups of parasitic forms, such as the rare occurrence in man of *Strongylus apri,* one of the commonest parasites of the pig in Europe, or of *Dipylidium caninum,* the cosmopolitan tapeworm of both dog and cat which has been reported only rarely from man.

Such occasional parasites often occur under abnormal conditions; thus, a fish nematode, *Ascaris clavata,* was discovered once in the hollow tooth of a man. Here the position was probably accidental, but in other cases it is the result of the action of the parasite itself. So the red spiders, or "jigger" mites, of the central states bury themselves in the skin of man, although such a position is so clearly abnormal that, in fact, it destroys the chance of development and costs the parasite its life. A small leech, *Limnotis nilotica,* common in the circum-Mediterranean area, is often drawn into the throats of men and other animals drinking at wayside pools. It usually retains its position, causing serious difficulty, until removed by operative interference; hence it has become an occasional parasite of man rather than as most leeches, a temporary parasite; or one may regard it as falling in the next following group of accidental parasites. This example shows most clearly the narrow and somewhat artificial limits which separate these groups of parasites from one another. Of the mites also which have been reported a few times as obtained living from stomach, bladder and rectum, it is difficult to say whether they are occasional or accidental parasites of man.

There are also, rarely, other forms which usually occur free living, but which by chance are introduced into some organ in which conditions are such that they can thrive. They become thus accidental parasites, a group difficult practically to distinguish from the last, the occasional parasites, and yet presenting somewhat different biologic conditions. The recent discovery by Stiles and Frankland, as well as others, of the vinegar eel, *Anguillula aceti,* as an apparently successful colonizer of the bladder in a female patient, illustrates the type under consideration. There is little doubt that this parasite was introduced through the use of vinegar in vaginal douches and effected a successful colonization, possibly by virtue of the trace of albumin present in the urine which furnished the worms with nourishment. Equally striking is the case of Scheiber, who discovered *Pelodera pellio* in the urine of a female patient in Hungary. This typical slime-inhabiting nematode gained entrance no doubt through the application of mud poultices, which are commonly employed by peasants in that region. It should be noticed that such accidental parasites are necessarily confined to those groups of animals which have free living forms. Such are *Protozoa, Nematoda* and, perhaps, *Insecta* in the larval condition, while *Cestoda* and *Trematoda,* which live only as parasitic forms in some host, would become rather occasional parasites of man should they stray into the human system in some chance manner and find favorable conditions for existence.

Another type of animals found in man is quite distinct from those just considered. They are known as pseudoparasites and rank high in clinical importance. Among them one may recognize several very distinct classes. First, those which are actually free living animals, introduced by accident, usually in food or drink, into the human alimentary canal, and exciting there abnormal conditions which induce their more or less immediate and forcible expulsion. Thus Botkin found in the vomit of a Russian numbers of a small nematode which he wrongly believed to be a human parasite. In fact, it lives normally in the onion, and its introduction into the stomach with this food excited the untoward symptoms noted. Similarly, Blanchard records a case in which coleopterous larvæ were found in the vomit of a child.

That such may be the result of introducing a true parasite from some other host is indicated by several cases like that of *Ascaris maritima,* which Leuckart described from a single specimen vomited by a child in Greenland and which this author noted was very similar to *A. transfuga* of the brown bear. In all probability it was ingested with the viscera of some animal (seal?), though it may have been a species which had strayed into this unusual host only to make its appearance under the circumstances noted.

Of similar import are the cases of *Gordius*, the hair snake, which have been reported from man. In the adult condition this is normally a free living species, but about a dozen specimens have been taken from man after a supposed sojourn of from a few hours to fourteen days. Some of these have been vomited and others passed per anum. This form has often been passed off on the physician as a true parasite, and in one celebrated case at least as the Guinea worm.

In the same way one may find the explanation for other isolated cases of parasitism, even when the parasite is reported to have been passed from the alimentary canal. Thus Cobbold reported that larvæ of *Blaps mortisaga*, the English churchyard beetle, were found in fecal discharges, and many authors have recorded the presence of dipterous larvæ in the alimentary canal.

The majority of such observers has inclined to regard the larvæ as temporary endoparasites and to consider that they have accommodated themselves to the conditions present in the human host. Certain cases seem to show that these larvæ live for some time in the canal and often appear to evoke serious or even fatal disturbances; and yet the conclusions are open to grave doubt, for Calandruccio experimented extensively on two families, to which many of the supposed accidental parasites belong, and found that the ingested larvæ were regularly and promptly evacuated dead or dying, and in no case secured a footing in the canal.

Among the myriopods, about 40 recorded cases of pseudoparasitism have been brought together and discussed by Blanchard. In the large majority the animal was taken from the nasal fossæ, though in a smaller number it was actually obtained living from the alimentary canal, where it undoubtedly can exist for a brief time in spite of the untoward environment. The ingestion of such forms is purely accidental, the symptoms those of helminthiasis in general, and their stay at most very limited. They never show any evidence of adaptation to the new environment.

In some such accidental fashion other forms are sometimes introduced into various organs not connected with the alimentary system. Thus Trouessart reported the occurrence of a species of detricolous sarcoptids in the human testicle, where the mites formed an old colony in a painless cystic tumor.

In addition to the living animals of the types noted, the second class of pseudoparasites includes a large number of other structures which have been described as parasites. These may be considered conveniently in a few groups, the first of which includes bodies which are parts of the so-called host animal itself. Thus fragments of the arteria hyaloidea have been described as eye worms (*Filaria lentis, F. oculi-humani*, etc.); the supposed organisms of whooping cough are nothing more nor less than ciliated tracheal cells torn from the wall and found in the sputum in distorted form, while groups of small axillary and inguinal glands, hydatid moles and pacchionian bodies from the arachnoid have been frequently put on record as hydatid cysts.

Parts of substances used as food, both of plant and of animal origin, which have not been destroyed by the action of digestive juices, are also among the pseudoparasites of man. The radulæ of the common limpet have been reported several times from stools; the seeds of the mulberry were duly baptized as parasitic worms; and plant vessels and other similar undigested structures of peculiar appearance appear periodically as new helminths. That a differentiation of such structures is not simple appears from the account given by Stiles of the partially digested banana fibers, which closely simulate minute tapeworms. Some years ago Leuckart entrapped a group of research students in helminthology with the pulp vesicles of an orange which were found in a fecal examination.

In all of the cases considered above, it has been presupposed that the structures obtained actually came from within the human body. It is necessary, however, that the physician should have personal evidence of this, for there is another class of objects of which it can not be said. And these structures deserve brief mention in closing.

In determining the nature of unusual forms reported from man, it should always be kept in mind that in the absence of positive personal evidence, suspicion in cases of neurasthenia at least favors the deceitful introduction of such doubtful bodies. In many cases on record such things as earthworms, chicken entrails, etc., have been forcibly introduced into the rectum or vagina and have been subsequently reported by the attending physician as undoubted human entozoa of a remarkable character! Here, as elsewhere, the appearance of unusual structures should at once arouse the suspicion of the physician and call forth a most searching examination of the case in all its factors that any deceit be disclosed, or that in the event of the discovery of some rare parasite all conditions connected with its appearance be put on record for future use. Furthermore, it is important to preserve the fullest data in regard to any substances associated with it, as well as the food of the patient, whether usual or unusual, since in this way some hint as to the introduction of the supposed parasite may be found.

Finally, it is important to direct attention to the wisdom of preserving all doubtful material, whether new or not, in considerable quantities, and both the eggs and embryos, as well as the adults, or as many thereof as can be obtained. In case of doubt regarding the identification of species, or possible question as to the source, it is important that the material or some portion of it should be referred to some expert helminthologist for examination and verification of the result attained. It is always a pleasure to have the opportunity of examining such material, and to assist one's colleagues in any way in connection with such studies. In most cases, in fact, and especially such as deal with the occurrence of rare forms, or such as are new, it is desirable that such corroborative evidence should be secured before publication, for in this way is often prevented the confusion which arises from incorrect descriptions or from the publication of new names which are merely synonymous with those already known to science. As a matter of fact, the practitioner can hardly hope to be acquainted with the entire range of parasitic species, and if to the accurate observations which he records regarding the clinical side of the question can be appended the notes of some helminthologist who is in a position to give an expert opinion regarding the other side, the results are far more valuable to the world from their rounded scientific character and permanent value, than could be attained by the publication of either group of factors separately.

The large number of parasites in other animals which some unusual combination of circumstances may bring into the human system makes it imperative that any supposedly new species be submitted to the judgment of a specialist before it is described as such. Only in this way can the discoverer avoid adding to the long list of synonyms which already burden the literature of this subject and render it so difficult for the investigator not a specialist in this particular line to find his way aright.

DISCUSSION.

Dr. Frank B. Wynn, Indianapolis—First, I want to refer to a clinical case in the practice of W. B. Fletcher of Indianapolis. A patient had suffered for a long period from seizures of an epileptic nature of severe type. Segments of tapeworms were found in the stools. After the administration of proper remedies the parasite was expelled and the patient had complete relief from all symptoms.

A word in reference to spurious helminths. I recently had sent to me by a physician worms alleged to have been passed in the stools of a woman. They were the larvæ of the bluebottle fly. As she was said to be passing these in large numbers, I asked for a second sample and found them different from the first. A third supply revealed still a different species. So my first suspicions were confirmed, that a hysterical patient was practicing deception on the Doctor.

Dr. Ward has referred to one feature of great practical importance, which I should like to emphasize if possible, and that is the errors of practitioners in dealing with supposed intestinal parasites. Some two years ago I received from a doctor some little dark threads, passed in the stools of a patient and thought to be worms. Since then I have received two other specimens, identically similar from different patients. Under the microscope were to be seen chains of large, amber-colored oval bodies. My first impression was that they were uric acid nuggets formed on a cotton fibril in the vessel where the excreta had been passed, and that the sharp points of the crystals had been dissolved off as the urine became alkaline. By and by I found spirals, proving the vegetable character of the bodies. The next point of interest to determine was from what vegetable they came. In conjunction with my botanical friend, John S. Wright, it was soon demonstrated that these dark strings were of the fibrovascular tissue of the banana, especially the older fruit near the core. Age or light leads to pigmentation of the rows of large parenchyma cells along the strings of fibrovascular tissue. (The specimens exhibited were reported to the Indianapolis Medical Society about two years ago.)

Shortly after this investigation I received another specimen supposed to be tapeworm. The segments were too long and slender, however, and instead of being square cut were oblique at the ends. I suspected they were vegetable in character, and on investigation they were proven to be cabbage, prepared as slaw. (Specimen exhibited.)

I want to call attention to another structure not rarely found in the stools which I had some difficulty in running down. Dr. Ward informs me that he had a similar experience. I refer to the fusiform and attenuated masses of cells found in the lemon and orange, which are not unlike the fluke. Some were sent to me two years ago, supposed to be parasites.

These experiences led me to start some of my students in the medical department of the University of Indianapolis to studying some of the more common fruits and vegetables used as articles of diet. The results are presented in the Scientific Exhibit. First, sections were prepared of crude vegetable or fruit. Secondly, fresh glycerin mounts were made of the same articles, as found on the table ready for eating. And thirdly, each student ate abundantly of the article assigned, and afterward his stools were carefully examined for remnants of the food taken. We found that a number of these examinations showed products which might easily be mistaken for parasites. The fibrovascular threads of the pineapple, rhubarb and celery are particularly apt to mislead, as will be readily appreciated from the specimens here exhibited.

The specimen I have here came from my own stools. I was surprised to find these long flakes, not unlike tapeworms. It proves to be paper. Paper intimately adherent to candy, meat from the butcher shop, bread, etc., is often swallowed unconsciously, is wholly indigestible and might be mistaken for the segments of tapeworm or membranous exfoliation of colitis.

Dr. Walter L. Bierring, Iowa City, Iowa—In connection with the remarks made by Dr. Wynn, I would like to refer to an experience with the spurious tapeworm disease in Iowa during the past winter. Two specimens of material were sent to me from different parts of the state, in both cases being derived from the stools of children 5 years of age. Periodical attacks of indigestion were noted and when this tapeworm-like material was passed the child in each instance improved. One of the specimens came from one of the best physicians of our state, who entertained an idea that it might be a case of *Tænia nana* infection. After repeated examination of the material and suspecting it to be some vegetable fiber, I referred it to Dr. Stiles of Washington, who informed me that the tapeworm-like material was composed of undigested banana fibers. For the purpose of corroboration various tests were made in the pathologic laboratory, one of which consisted in giving test meals of banana and finding the dark-colored segmented fibers subsequently in the stool, and the other consisted in applying a 10 per cent. solution of potassium hydrate to banana, which brought the transverse fibers of the banana that are evidently indigestible out very prominently, also giving to them the dark color which they usually attain on exposure to the light.

Dr. Allen J. Smith, Galveston, Texas—I have found that almost every living thing is possessed of some parasite, and they have a widespread pathogenic influence. The subject is one obtaining greater recognition within recent years, as shown by the increasing prominence given it in pathologic text-books; but as yet in this country it has by no means had sufficient stress laid on it. There is not as yet sufficient demand for information on the lines of the paper just read to have called forth a single good text-book in our language. There are a number of excellent German and French works dealing in an authoritative and systematic manner with human and comparative zoöparasitology, but none in our own tongue (except the work written by Neumann for veterinarians and translated from the German). Within the past three years I have approached no less than six of the more prominent American medical book publishers with a proposition to publish a translation of Railliet's *Traite de Zoologie médicale et agricole*, but all declined on the ground of financial danger. I regret my failure, as the work in hand of many practitioners in this country really presents a great need for some standard work of the kind. As an illustration of the importance of the general subject, I call attention to the recent work of a number of observers in relation to the new American hookworm, *Uncinaria americana* (Stiles); a parasite first discovered in Galveston, and since then met by a number of observers in the southern and eastern parts of the country. The excellent work of Stiles, of the United States Public Health and Marine-Hospital Service, has demonstrated how this parasite is probably wholly or at least largely responsible for the miserable state of the well-known "poor whites," known so widely as dirt "eaters" in these districts, pale, large-bellied and thin, for the inertness and laziness for which they are so much criticised, as well as for really serious pathologic conditions in these people. Aside from its proper influences this parasite seems to seriously influence and perhaps modify the course of other diseases with which it may be associated; for example, it probably is an influence making malaria more persistent. From observations of my own, where the uncinaria and malarial parasites coexisted, I have noted the difficulty in getting rid of the malarial infection by the usual use of quinin until the intestinal parasites have been disposed of—a relationship perhaps depending on the influence of the latter in keeping at a low ebb the natural antagonistic powers of the body against the malarial organisms and thus permitting redevelopment of any hematozoa remaining after a course of quinin administration. This I have so persistently noted that I feel the importance of seeking the coexistence of these intestinal parasites in the particularly obstinate, chronic and recurrent forms of malaria in these southern districts as possible influences in the clinical course of such a case.

Another example of the importance of the subject is the recent discovery in Texas and elsewhere of *Tænia nana*, a tapeworm known to be responsible for considerable intestinal disturbance, for the development of pernicious anemia and in various instances of epileptiform phenomena. Such instances of the importance of animal parasites might be indefinitely multiplied; and the importance of this branch of pathology is manifesting itself more and more as time goes on. The field, however, has by no means received the attention its importance deserves; and for one I feel anxious that it shall soon be represented by some adequate reference work in our own language, or some translation of one of the worthy European works annotated from an American standpoint.

Dr. H. B. Ward, Lincoln, Neb.—I think Dr. Wynn's date of two years is the record for the banana fibers, though within that time Stiles of Washington, Bierring of Iowa and a number of men in different parts of the country have made the same discovery. One case to which I did not refer in the paper came to me last year in Nebraska, which has the further interest that the physician said it was a remarkable case of tapeworm, as it was found in the alimentary canal and also in the vagina.

One thing I should like to emphasize in closing. It has been mentioned again and again to-day in this and in other sections that there is a sad lack of fecal examinations. Last year a very well educated and a very bright and thoughtful physician in a city not my own permitted a patient to die of pernicious anemia without a single fecal examination.

UNCINARIASIS IN THE SOUTH.

FURTHER OBSERVATIONS.*

CLAUDE A. SMITH, M.D.
Pathologist to Grady Hospital; Demonstrator of Pathology and Bacteriology, Atlanta College of Physicians and Surgeons; Professor of Pathology and Bacteriology, Southern Dental College.
ATLANTA, GA.

Since presenting the paper before this Section at the meeting in Saratoga last year, in which I reported three cases of ankylostomiasis, or uncinariasis, the first case being found postmortem, in December, 1901, and the other two being mild cases found among the negro convicts working in the brickyards near Atlanta, I have found this disease to be exceedingly common from the Carolinas to Texas. I make this statement as a result of examinations of medical students at the Atlanta College of Physicians and Surgeons, at the Southern Dental College, patients sent to Atlanta from the adjoining states and a systematic examination of all the patients in the Grady Hospital for the past year. However, very few cases have appeared at the Grady Hospital for the reason that all the patients in the public wards must be residents of Atlanta, and, as this is a disease of the country and not of the city, we would not, therefore, expect to find many in the hospital. Since the postmortem on the case reported last year, I have made fifty postmortem examinations at the hospital, and among these have had only one case of uncinariasis.

This disease is found in the mountains as well as in the lowlands, but is more common the farther south you go, as the conditions for the production and development of the larvæ are more favorable. The disease is very common in regions where the chances of contamination of the drinking water with surface drainage is very slight.

The disease may occur at any age, but is more commonly found in children. The cases seen by me range from three years to over fifty years of age. It is more common in males than females, and is usually found among the children of the lower classes, but I have seen several cases among the better class. It appears to be more frequent among the whites than the negroes. It is a disease of the country, and the possibility of its presence should be considered in all patients who give a history of having resided in the country or small villages within seven or eight years. It prevails where unsanitary conditions abound.

The eggs of the parasite are passed in the feces of persons affected with the disease, and these feces, being deposited about on the earth, furnish the original source of infection. The life history of the parasite found in the dog and the one found in man is very similar, but I have not been able to infect one from the other.

I have found the eggs in the stools of a dog, and a careful postmortem examination showed only three of the worms in the intestine of the dog. This shows that no matter how small the number of worms may be, it is possible to find the eggs in the feces. Practically, the same thing applies to the parasite found in the human intestine, as one case disclosed only seven worms postmortem. It is possible for one experienced in making these examinations to give a fair idea of the number of worms in the intestine from the number of eggs appearing in the stools. They can be estimated with a greater degree of accuracy in this way than by the symptoms of the patient, as a comparatively small number in one person will produce severer symptoms than a larger number in another person.

A live uncinaria removed from a dog under chloroform was seen by me to discharge 22 eggs in one minute. and while this was taking place there was no appreciable diminution in the quantity of eggs contained in the uterus of the worm. This gives us some idea of the great number of eggs which may be thrown off by one worm.

As a rule, the eggs do not hatch while in the intestines. I have found the larvæ hatched out in only two specimens of feces. Usually, it is necessary for the eggs to become mixed with earth before they will begin to hatch; that is, they seem to need air. The eggs can be hatched without any difficulty if the feces containing the eggs are mixed with sufficient earth or sand to destroy the odor of the feces. They will hatch in from twelve to twenty-four hours, or longer, depending on the temperature and moisture; too much moisture inhibiting their development.

They are destroyed by freezing, as also by drying, but they must be thoroughly dry, the least bit of moisture preserving them. Feces which are perfectly dry on the outside will be found to be moist in the interior and the eggs there still preserving their vitality. In warm weather, if the eggs are kept in moist feces, I have been unable to hatch any of them after two weeks. In hatching, I have observed the larva emerge tail first from the egg.

For the first day or so the larva is rather sluggish, but as the first sheath appears it becomes more energetic and is extremely lively at times. If in water alone it wiggles at a lively rate, but does not make much headway, but if imbedded in earth or sand, where it can obtain a foothold, by a sinuous motion it darts through sand at a lively rate. These periods of activity are of

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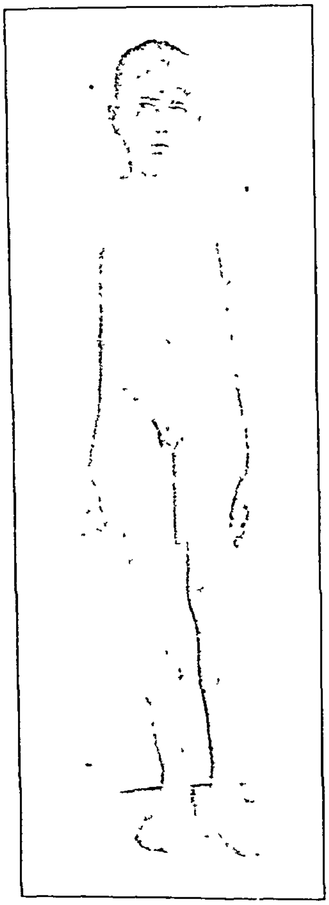
* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Pathology and Physiology, and approved for publication by the Executive Committee: Drs. L. Hektoen, F. B. Wynn and W. S. Hall.

ust two days before her death, and in getting her his-ory learned that she had had an attack of ground itch about four or five years previously, but she informed ne that she did not have it very bad, as it existed only n one place between two toes. A careful search at the postmortem examination disclosed only seven of the worms. I have seen only two cases of the disease which did not give a history of having had ground itch within seven years. They were two dental students who lived at the same place in Florida, and they were both sure that they had not had ground itch for fourteen or fifteen years. However, their drinking water was obtained from wells only three or four feet deep and which overflowed every time it rained. These were probably infected through drinking water, but in both cases the infection was very slight, as it required careful search to find the eggs in the stools, as they were so very few in number.

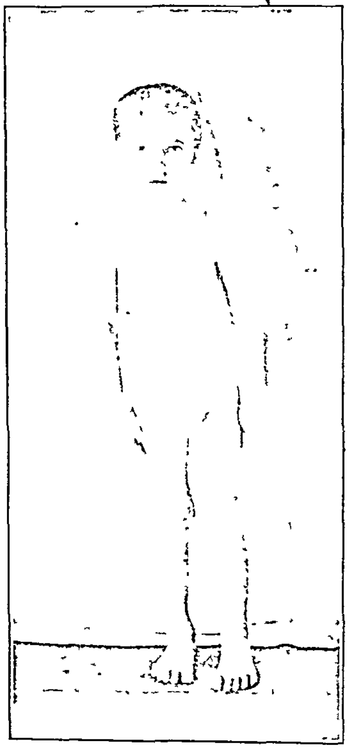


Case 3.—White; male; age 17. Skin resembles yellow parchment; mucous membranes blanched; appetite poor; sleeps fairly well; has severe griping of bowels at times; badly constipated. Red corpuscles, 1,672,000; hemoglobin, 22 per cent. Notice lack of development of sexual organs Has had "ground itch" so many times that can not recall any year that he did not have it. Stools contain eggs of uncinaria in great numbers. Barely able to get about, and unable to do any work.

Many of the cases of the disease were suspected and located only on finding a history of having had ground itch within seven years. One was a medical student from the mountains of South Carolina, who presented a picture of perfect health, with a ruddy complexion, and who did not suspect that he had uncinariasis until he overheard a conversation about the relation of ground itch to the disease. He then came to me and told me that he had had a severe attack of ground itch about five or six years before, and on examination of his stools I found numerous eggs of the uncinaria. Examination of his blood showed: red corpuscles, 4,120,000, and hemoglobin, 95 per cent. After two doses of thymol of one gram each, eighteen uncinaria were found in his stools and no eggs were found a week later. It usually requires several attacks of ground itch, extending over a period of several summers, for sufficient numbers of the larvæ to get into the system to produce the extreme type of the disease.

A careful examination was made of all the members of a family of eight who had lived under the same conditions, drinking the same water, etc., and this showed that those who had been keeping the feet protected for over eight years by wearing shoes, and who had not had ground itch during that time, did not have the eggs in their stools, while all who had had ground itch within that time had the eggs in quantities in direct proportion to the number and severity of the attacks of ground itch.

You may take the history of some of the cases which have at one time been in the extreme stage, and you will find that they had attacks of ground itch year after year, or probably skipping a year now and then, and they would get worse from year to year until they had had attacks covering a period of seven years or more, and probably they were old enough by that time to begin wearing shoes in the summer time, and, therefore, those parasites which first gained entrance into the body would have passed through their allotted period of existence and would die out, and by the patient wearing shoes, additional larvæ would fail to get into the body, and as each following year more and more of the uncinaria would die out, the patient will give a history of gradual improvement, and his body will begin to take on a vigorous development. There is no difficulty in finding plenty of these cases which give a history of having once been extremely pale and anemic, but have "outgrown" it.



Case 4.—White; male; age 7. Skin yellowish-white; mucous membranes blanched; appetite poor and perverted; bowels constipated; shortness of breath; loud hemic murmur; can not walk over 200 yards at a time; headache and vomiting every morning; stools contain an abundance of eggs of uncinaria. Red corpuscles, 1,208,000; hemoglobin, 10 per cent. Has had "ground-itch" every year since able to walk. Has had whooping cough, but no other sickness.

The disease gradually disappears after they stop going barefoot.

The number of the uncinaria in the intestines varies from a few to several hundred. The number is nearly always in direct proportion to the number and severity of attacks of ground itch. A few of the uncinaria may produce no apparent effect on the patient, but it no doubt renders the patient more susceptible to infection as a result of the interference with the nutrition. Severe infections produce various grades of anemia. The blood counts show all stages; some being so severe as to produce dizziness, hemic murmurs and the weakness which accompanies such conditions. These extreme cases are usually emaciated, but the emaciation may not be apparent at first on account of edema. In the extreme cases the skin is of a yellowish-white parchment color, and over the exposed portions of the body, as the cheeks and hands, it appears to be much thickened. The mucous membrane also presents a yellowish-white blanched appearance, and examination of the blood often shows the red corpuscles as low as 1,100,000, and the hemoglobin down to 10 and 15 per cent. If this severe condition is reached about the time of puberty, the sexual development does not take place, and it is not uncommon to see boys 17 and 18 years of age who are dwarfed and whose genital organs have the same appearance as those of a boy about 10 years of age. Also, you will find girls 18 years of age in whom there has never been any effort at menstruation, and who present no evidence of development into womanhood. We must remember that these are the extreme cases. They are the ones which give a history of numerous and severe attacks of ground itch, usually having it for a number of years, and members of the same family who are living under exactly the same conditions, but who have not had so many, nor such severe, attacks of ground itch will have only a small number of parasites in their intestines, and practically no interference with their development.

It is a most pitiable sight to see these severe cases in bright children who are unable to walk 200 yards without being almost completely exhausted and who have to sit down and rest before they can go further. They are unable to play the games with other children, but must drag out their lives sitting and lying around, watching the other children in their games and yearning for the strength to join in with them. Sometimes they succumb to additional infection of the uncinaria, or to attacks of other diseases.

In their earnest desire to be cured and become strong like other children, they are willing to undergo any treatment which will offer any chance of doing them good, and often you will find that they have made the rounds of all physicians in their district, but to no avail. I recall the case of one poor boy who was barely able to drag himself about, and on being told that there was a chance of something being done for him, he arose early in the morning only to find that the rain was pouring in torrents, but, nothing daunted, he dragged himself all alone three miles through the pouring rain to the physician's office, drenched to the skin and shivering with cold, but willing and anxious to begin at once with any treatment that offered any chance of doing him good. That was only three weeks ago, and since then his improvement has been remarkable, as he is now at work again on the farm.

Every country practitioner in the South has more or less of these cases of anemia in his practice, and sometimes they will improve slightly with prescriptions of iron, arsenic, etc., but with no permanent results.

The poor farmers throughout the country who have a house full of children to support are dependent to a great extent on the assistance of these children to make sufficient for their maintenance, and when the children are affected with this disease and are unable to assist him to any extent, but rather instead are a burden to him to pay their physician's bills and supply medicine—these are the ones who often seek the cotton mill, where most of the children, although dwarfed and stunted and incapable of severe exertion, yet have sufficient strength to sit at a loom and do light work about the mills. While it is deplorable that child labor is not better controlled, and, while I believe in giving the devil his dues, yet we should, at the same time, be just, for no doubt many of the cases of children whose lives are supposed to be blighted in the cotton mills, were blighted before they went there, and the confinement and tedious work is but assisting in the work of destruction already begun.

We read our statistics of the destruction wrought by the dreaded tuberculosis and pneumonia, etc., but we have here a disease which is literally sapping the life-blood of the South. But, unlike tuberculosis and pneumonia, etc., we have for this terrible disease an easy means of diagnosis, and a cure which is simple and certain. All that is necessary is for the physicians throughout the country to become familiar with the diagnosis and treatment.

Before treatment is instituted, a positive diagnosis can only be made by the examination of the stools for the eggs, and one experienced in examining these stools with the microscope can get a better idea of the number of parasites in the intestines than from the symptoms of the patient.

The treatment is very simple, but to be thoroughly effective certain precautions should be observed. Two doses of thymol finely powdered of one or two grams each are to be given about two hours apart. The first dose should be preceded several hours by a dose of some purgative, and followed by the same. One very important point is that no food must be taken into the stomach from the time of the first dose of the purgative until after the second is taken. The plan is as follows: A large dose of salts is given at night and the next morning at 8 o'clock two grams of *finely powdered* thymol is given, and two hours later a second dose of two grams, and two hours after this a large dose of salts is given. I lay stress on having the thymol finely powdered and no food being taken into the stomach between the administration of the purgatives. In some instances this treatment is not thoroughly effective, and a microscopic examination of the stools should always be made about a week later, and if eggs are still present, the treatment should be repeated.

In the postmortem examinations of the human intestines containing the uncinaria, I have noticed that the parasite is not so firmly attached to the intestinal mucous membrane, and also that it does not seem to lacerate the mucous membrane, or leave the white central spot with the hemorrhagic area surrounding it, as described of the old world parasite, and also of the parasite in the dog. We can readily understand this when we bear in mind the structure of the oral cavity of the uncinaria, as given by Dr. Stiles, showing that it does not have the little hooklets which are found in the old world parasite and the dog in this country, and, therefore, does not become so firmly attached or so severely lacerate the mucous membrane.

The prophylaxis of this disease is very simple. It is not necessary to boil the water for drinking purposes, unless the water has been contaminated by surface drainage after a rain. If every person will wear shoes which thoroughly protect the feet in rainy weather or in damp places, there is very little chance of infection.

To determine whether the parasite which infects the dog in my section would exist in the human body, I administered successive doses of the larvæ of this parasite to a negro boy 19 years of age (of course, with his consent), beginning the first dose July 11, 1902, when the larvæ were four days old, and continuing about every two weeks until October 14, using larvæ from the original culture made July 7. The patient disappeared October 14, but examinations of stools two days before that were negative.

In making these investigations, I was much indebted to Dr. S. H. Green of Bolton, Ga., and Dr. C. D. Redding of Warthen, Ga.; also to Drs. J. A. Randall, W. E. Persons, C. D. Jeffries, O. T. White and W. A. Selman, of the resident staff of Grady Hospital.

DISCUSSION.

Dr. H. B. Ward, Lincoln, Neb.—Dr. Smith has gone further than any other investigator with reference to the life history. It is of the utmost importance that the method of introduction into the body should be known, as well as the interval between the various stages of development. Dr. Smith has investigated the relation between ankylostomiasis and ground itch so thoroughly as to leave little doubt as to their probable connection. I think the probability is very strong indeed. One of the latest investigators records the fact recently in one of the German journals that he has succeeded in infecting the skin with the larvæ. The larvæ were placed on a member which was about to be amputated. When the skin was sectioned after the amputation the larvæ were found to be penetrating the skin along the line of the hair follicles, and they could be made out in the sections. Some had gone in as far as the subdermal tissue. I think that is the first instance where the entrance of the larvæ has been thoroughly established.

Another point deserves brief mention. The experiments of Looss on dogs shows conclusively to my mind that the infection can not be contracted through drinking water. Where the dogs were fed on infected water the larvæ passed through the canal, except a few which bored into the wall of the esophagus and went down into the tissue, where he got the three stages of development. Those which traversed the canal did not attain the adult condition, but those which got into the tissues attained at least the later larval stage.

I presume Dr. Smith has already thought of it, but it would seem to me that in the region where ground itch prevails he might succeed in some postmortem in getting a portion of the tissue from one who had been recently infected with ground itch, and sections made from this would throw light on the subject.

Dr. Claude A. Smith, Atlanta, Ga.—I recognize the fact that the results so far are somewhat incomplete, and that we have not been able yet to obtain positive proof as to the transmission of the disease. Experiments are being still carried on, from which we hope to obtain more satisfactory results. Until then it can not be stated positively that the infection does get into the system through the feet, but from the evidence of cases I have seen I feel positive that this is so.

As to the question of postmortem of subjects who have had ground itch, it must be remembered that these cases are nearly all in the country, and you know how difficult it is to get permission to hold a postmortem in the country, especially in the case of children. They even object sometimes to examination of the stools.

I hope in the near future to be able to present the proof of the transmission of the disease.

To Remove Plaster-of-Paris Bandages.—Acetic acid brushed in a line over the bandage will render it soft, and in a few minutes it may be cut with an ordinary knife.—*Applied Med.*

OCCURRENCE OF THE STRONGYLOIDES INTESTINALIS IN THE UNITED STATES.

MARSHALL LANGTON PRICE, M.D.
BALTIMORE.

(Concluded from page 655.)

RHABDITIFORM EMBRYOS.

As the parasite occurs in the stools as the rhabditiform embryo, and probably never in any form (excepting rarely after a purge, when the passage of the parthenogenetic mother worm has been reported by one or two observers), it follows that the thorough understanding of this form is most essential to diagnosis; and I have, therefore, described it below at some length.

In a properly prepared specimen the embryo appears as a clear, almost hyaline, nematode, completely transparent and possessed of a very active motility, swimming among the granular detritus, and pushing aside the smaller obstacles in its path, and turning aside to pass the larger ones, when its progress is arrested by an obstacle of considerable size. The consistency of the nematode seems scarcely to exceed that of protoplasm, the parasite quivering like jelly with every movement, or when the microscopic stage was jarred or shaken. It appears to possess a considerable degree of irritability, and when aggregated masses of bacteria would lodge against its side, motions of the tail would be produced toward the offending object.

The structure appears granular. The parasite, on examination, is seen to consist of two portions, an outer clear portion or envelope, and an inner granular zone. The outer portion, forming about one-tenth of the transverse diameter of the parasite, is clear and homogeneous, with the exception of a few fine granules. The inner portion is markedly granular and is well organized.

With the death of the parasite the clear homogeneous structure is lost, the granules become larger and coarser and invade the outer envelope. Finally the whole parasite becomes uniformly granular and shrunken, its transparency is largely lost, and all distinction between the envelope and inner granular zone disappears. The parasite appears to undergo a rapidly granular degeneration as soon as dead.

The length of the nematode varies. The average is probably about 0.3 mm., the breadth 0.04 mm. The head is blunt and slightly conical in shape, and contains the anterior portion of the digestive canal. The body gradually enlarges from the head to its middle part, and then gradually diminishes in size to the thick and somewhat pointed tail. The head is largely occupied by the triangular or fusiform darker area of cells surrounding the digestive canal which passes from the cephalic extremity backward. This darker area becomes constricted as soon as the neck is reached, and after running for a variable distance in a uniform size, again expands into an ovoid or spherical area; leaving this, the canal again passes toward the caudal extremity. A slight fusiform dilatation occurs at about the middle of the body, the canal then passes on in its normal size until it reaches the base of the tail, where a saccular dilatation appears. This appearance, which has not been previously described, can be demonstrated in the majority of specimens by careful examination, and no specimen in which the parasites were numerous failed to show one or more in which this structure was evident. The intestine, much diminished in caliber, turns abruptly after leaving this inferior dilatation and passes to the side of the animal, where it terminates in a slight mammilliform projection. Just below the middle of the body, the intestine was pushed somewhat to one side by a large oval body, quite refractile and containing rather large granules. This represents the undifferentiated sexual gland. The intestinal contents are plainly visible in the intestinal canal and consist of fluid containing numerous small particles in suspension. Among these can be seen dead bacteria and portions of bacteria and the ordinary granular detritus found in the stools. The motion of the parasite aids the passage of the intestinal contents toward the caudal extremity, but peristalsis has been provided for in another way, to be later described. The motion of the parasite is constant and never ceases, except momentarily; the motion, indeed, seems necessary to the life of the parasite, and when it ceases the parasite soon shrinks and undergoes the granular degeneration already described. The motion of the parasite apparently acts in somewhat the same manner as the cardiovascular system in higher animals in promoting the interchange of the tissue juices.

The minute structure of the digestive system shows many interesting details. The canal begins, in many specimens, in a procephalic projection, which has a cup-shaped depression on its anterior end. The digestive canal passes through this portion, which is transparent and non-granular, and not being especially refractile, is difficult to demonstrate in all specimens. The canal, passing into the head, enters the anterior esophageal expansion, which consists of stratified squamous cells with oval or flattened nuclei. It then passes toward the tail until it reaches the second globular expansion, where it is suddenly lost, plunging, in fact, into the center of this mass. This globular mass is made up of large secreting cells containing fine granules, and a large centrally-placed nucleus. This organ appears analogous to a stomach, and probably furnishes the digestive juices. In the center appears a round, clear area, which is the cavity of the organ showing through the cell mass. It is in this situation that the tridentate chitinous armature described by certain authors makes its appearance. I have never been able to demonstrate any opening in this situation, and have never observed the ingestion or excretion of any of the intestinal contents by means of it. The appearance is like that of the small Greek letter gamma. (The upper limb appears to be formed by the intestinal canal showing through the cells, and the two lower limbs by the interval between two of the large secreting cells, whose angle corresponds to the angle of refraction of the parasite.) As soon as this secreting organ becomes continuous with the intestinal canal (as occurs in the filariform embryo) this appearance at once is lost. About the middle of the body the canal enlarges slightly and extends some distance downward before it again contracts. This portion of the canal is lined by distinct columnar cells with dark nuclei; this appears in analogy with the secreting organ to be the absorptive portion of the parasite.

The digestive canal may at times be seen to suddenly contract longitudinally. The result of this is that a portion of the canal becomes convoluted or S-shaped, and its lumen in this portion becomes narrowed, or even obliterated; acting in this way as an adjunct to the more constant peristalsis produced by the movements of the animal. The effect of the globular dilatation seen at the caudal extremity is presumably to delay the intestinal contents until they can be effectually acted on by the tissue juices.

MORPHOLOGIC VARIATIONS OF RHABDITIFORM EMBRYOS.

The variations of form of the *Strongyloides intestinalis* do not end with the four distinct types mentioned, but the embryonic forms, especially, show a number of other morphologic variations. It is important to realize this fact, as these variations may otherwise be mistaken for different species. Between the two widely varying types of embryos, viz., the filariform and rhabditiform, are found many intermediate forms. The youngest form of embryo is short and thick, the older specimens become longer and thinner, and in the shape of their bodies come to resemble the filariform type. The line of demarcation is, however, distinct between the two types in the structure of their internal organs. In one specimen observed both the filariform and rhabditiform embryos were found in the same specimen with others that in the shape of the body resembled the filariform, but were rhabditiform embryos. No marked variations occur in the filariform type, but variations in the rhabditiform embryos were frequent and occasionally marked.

In some of the embryos the intestinal canal was convoluted throughout. This occurred probably in less than 1 per cent. of the embryos observed, but in a single specimen examined two such were found. The esophagus showed a number of variations. Normally, the first esophageal enlargement was separated from the second by a considerable interval, the two portions being connected by the intermediate intestine. In one specimen, however, the interval was absent, the second expansion appearing at the lower end of the first. In this, as in a few other examples, the cephalic portion of the esophagus showed a double expansion.

In a few instances the embryos presented dark transverse striæ, alternating with lighter areas, the appearance being somewhat like that of voluntary muscle fiber. In these specimens the intestinal canal is usually convoluted, and along the outer and inner borders of the parasite appeared—corresponding to the origin of the dark bands—indentations, which became marked along the inner border when the parasite coiled.

It is probably an appearance similar to this which Strong describes as two longitudinal rows of muscle plates placed along either side of the central canal of the older rhabditiform embryos.

FILARIFORM EMBRYO.

The filariform embryo is about double the length of the younger rhabditiform variety; the capsule or ectodermic layer is thinner and more distinctly outlined than in the rhabditiform variety, and is more perfectly hyaline, containing only a few scattered granules. The inner granular portion is uniform in width. The two expansions seen toward the cephalic end of the rhabditiform embryo have disappeared; the oval sexual gland can not be distinguished; the inner portion is made up of round refractive granules like those of the rhabditiform variety, but larger in size; the intestinal canal ends relatively nearer the tail. The parasite moves very rapidly with a graceful undulatory motion.

CLINICAL HISTORY OF THE DISEASE: ETIOLOGY.

The etiologic factors other than the parasite have not been as yet thoroughly studied. Infection usually takes place by the mouth. It is probable that the parasite is usually introduced in this way as the filariform embryo. Leichtenstern caused infection experimentally in this way by administering filariform embryos to a human subject. Infection has been produced in animals by administering the eggs. The vehicle by which the parasites enter the system is frequently, no doubt, drinking water, but this does not appear to be the only means. Normand during his stay in China drank only water imported from Europe in order to avoid infection, yet he suffered from a rather severe attack. Fresh vegetables, he thinks, may be a means of conveyance of infection, owing to the Chinese method of fertilization of land by human manure. Probably domestic fowls have a great deal to do with spreading infection, no doubt, through the mediation of fresh vegetables. Fowls are more susceptible to this disease than man, and the infection passes readily from man to animal, and may pass with equal facility from animal to man. Infection through the skin has been demonstrated in rabbits recently under Dr. Stile's supervision. For human infection the infective material must be of comparatively recent origin, as the parasite does not survive long external to the body, even under the most favorable circumstances. The influence of sex in this disease has not been carefully studied. All of the cases which have come under my knowledge in this country have occurred in men. The occurrence of other diseases and of local disturbances of function in the intestine seem to influence, if not the actual infection, at least the manifestation of its results. The frequency with which the disease is associated with uncinariasis, with amebic dysentery, and with other diseases, seems to be more than a coincidence. Climate influences, as already stated, both the frequency of infection and the severity of its results. The more severe forms of the disease are infrequent in temperate countries.

PATHOLOGY.

The pathology of the parasite is mainly taken from Thayer's fatal case and from Strong's later studies. The changes found in the intestine are sufficient to refute the views of those observers who claim that the parasite is innocent to man. The possible ways in which the parasite may produce harm are numerous. Calmette's supposition that the parasite may give rise to substances acting as chemical irritants assumes some probability in the occurrence of a small round-celled infiltration about the ova and parasites, in the crypts of Lieberkuhn. The reflex effects may be a most important pathogenic element; certainly the constant intestinal indigestion, with its attending diarrhea and malnutrition, can not be easily explained by the small amount of inflammation present. The sudden involuntary passages are certainly a reflex nervous phenomenon. We already recognize that the presence of *Oxyuris vermicularis* in the mucous membrane of the rectum is capable of producing in children many reflex disturbances, and it seems reasonable to suppose that the presence of a like irritant in the duodenum and jejunum can produce even more profound effects. Possibly some of the nervous phenomena observed by Sylvestri, such as vertigo, weakness and gastric disturbance occurring in connection with this parasite, may have been of reflex origin.

From Case 1 of Thayer's series Strong prepared sections of the intestine from which he was able to show the injurious influence of the parasite in the intestine. The microscopic appearances were both interesting and instructive. Both embryos, mother worms and eggs were found in the crypts of Lieberkuhn; no eosinophilia was observed about the eggs containing the crypts, but there was present a small round-celled infiltration and karyokinetic figures were observed in the surrounding epithelial cell. The following is a detailed description of the sections prepared by Strong:

> *Section 1.*—Many eggs in various stages of segmentation, some containing embryos, seen generally lying in the bottom of the crypts of Lieberkuhn. In these crypts the epithelium is much compressed and often atrophied. The nucleus lies at the base of the cells, and about it no cell substance can be distinguished, as a rule. Some contain two eggs, and in such cases the epithelial cells seem markedly compressed and atrophied. About the crypts which contain eggs, particularly when they contain eggs which are segmenting or containing embryos not yet hatched, there are a few round cells about the crypt . . . In several sections where the egg has burst and the embryo escaped the epithelium of one side of the crypt has disappeared. About the crypt there is some proliferation, as is indicated by the karyokinetic figures seen in the nuclei of the surrounding epithelial cells . . . the underlying solitary follicles are somewhat swollen. In other crypts the egg rests on the basement membrane of the gland, the epithelium having (apparently) disappeared.
>
> Not infrequently what appears (in transverse sections) to be small cysts are seen lying in the walls of the crypt, resting on the basement membrane. Apparently the eggs have disappeared from the crypts, leaving clear areas. There is no apparent infiltration with round cells about these so-called cysts.
>
> *Section 2.*—Pieces of the adult female cut longitudinally and transversely. Not infrequently portions of the female containing the vulva may be seen just penetrating into the lumen of the crypts, while others are lying longitudinally or cut transversely in the bottom of the crypt. Occasionally slight round-celled infiltration is noted at the bottom of the crypts containing parasites, and the solitary follicles are slightly swollen. . . .
>
> *Section 3.*—Many of the crypts contain embryos. In these crypts there is generally flattening and atrophy of the epithelial cells . . . the embryos appear to compress the epithelium . . . mitotic figures and small round cells are seen without the crypt. In several sections embryos are apparently bursting out of the crypt and have desquamated epithelial cells lying about them. One section shows an embryo beneath the epithelium of the villus.

Teissier, in 1895, reported a remarkable case, in which the embryos of the *Strongyloides intestinalis* apparently appeared in both the blood and stools. On account of certain differences in his description of the parasite, and in the observations which he made on it, Thayer concludes that he was dealing with a parasite distinct from the strongyloides group. These differences were mainly as follows: (*a*) The finding of sexually differentiated forms in the fresh dejecta, as well as in culture specimens. (*b*) No internal structure could be demonstrated in the embryonic forms seen in the blood and the smaller forms found in the stools. (*c*) But one spicula was noted in the male form.

In addition to these differences, Teissier, in inoculating experiments on frogs, succeeded in producing metastatic foci in the intestine and lungs, which latter contained giant forms.

After discussing these differences, Thayer advances the supposition that the form of parasite with which Teissier was dealing was the *Ascaris nigrovenosa*, which corresponds closely to Teissier's description, especially in the occurrence of giant forms in frogs.

SYMPTOMS.

The symptoms are those of a more or less continuous diarrhea, characterized by periods of remission, which sometimes exceed one or more weeks' duration. The onset is gradual, and it is some days, or even weeks, before the diarrhea is fully established. The presence of the parasite may be attended by no symptoms for an indefinite period, and none may ever present themselves. As the diarrhea becomes fully established, the evidences of intestinal indigestion appear; certain articles of food will not be digested or absorbed in the intestinal canal. Reflex gastric disturbances may occur; there is occasional heaviness and eructations and slight nausea; vomiting occurs as a symptom in some cases; usually only the severer ones. During the height of the attack the movements increase from twelve to fifteen, or twenty-five per day.

A striking characteristic of the diarrhea is the absence of pain, tenesmus, or any violent depression, such as occurs in other intestinal diseases attended by frequent and copious discharges. Mucus occasionally occurs in the stools, but is always small in amount; in a few cases a trace of blood is present at the onset. The diarrhea may suddenly assume a dysenteric or choleriform character, with purging, vomiting, cyanosis and collapse. This is in many instances due to the concurrent dysentery, to which persons suffering from this disease have a marked predisposition.

Another striking feature is the absence of any elevation of temperature in uncomplicated cases. With the onset of intercurrent disease, and with advanced malnutrition, an elevation of temperature may be present, but with patients otherwise healthy the temperature curve remains uniform during the most severe attacks. In the case observed in the University Hospital the temperature curve showed remarkably few fluctuations, never rising above 99 F. during the patient's stay of nearly six weeks in the hospital. On several occasions of acute exacerbation where the bowel movements exceeded fifteen daily, the temperature did not rise one-half of a degree.

Owing to the intestinal indigestion and consequent malassimilation, there is progressive loss of weight during the acute periods; sweating is an occasional symptom, and a slight reflex cough is occasionally noted. In severe cases emaciation is advanced, there is great debility and weakness, and an intercurrent dysentery or other acute disease proves fatal. A striking and troublesome symptom not infrequently observed is incontinence of the bowel; this occurs most often during the night, but may occur suddenly in the day time. The desire to evacuate the bowels is sudden and almost irresistible. The tongue is usually clean and moist and the breath free from odor; there is no pain in the stomach, but occasionally some intestinal griping. The appetite is apt to be good, except in severe cases accompanied by nausea. The skin and eyes are usually clear, though the latter are occasionally subicteroid. Nervous symptoms are infrequent, but have been reported in a few cases. The symptoms observed were dizziness and vertigo with loss of appetite, weakness and slight nausea.

The blood changes are not usually marked; slight anemia is present, never approaching the degree observed in ankylostomiasis. Eosinophilia is probably not a symptom of uncomplicated cases; there is no leucocytosis. The stools present the ordinary appearance of intestinal indigestion, and contain undigested food. On microscopic examination there are present starch, granules and oil globules, together with pus, epithelial and red blood cells. After the disease is established the stools do not regain their normal consistence, but vary from a pasty to a fluid state. As would naturally be supposed, indigestible articles increase the diarrhea; corn especially, and occasionally beer, appear to excite a relapse.

DIAGNOSIS.

Diagnosis depends on examination of stools. The clinical features, however, are very suggestive; the occurrence of considerable intervals of remission, during which the patient largely regains his previous health, the absence of pain or any elevation of temperature, and the absence of blood or mucus in the stools in appreciable amounts, are all symptoms individual to this disease. Incontinence of the bowel, if present, is extremely characteristic. In practice, amebic dysentery will be most frequently confused with this disease, as they also run a very intermittent course, and the elevation of temperature may be slight or absent. An examination of the blood in these cases will at once clear up the diagnosis. The leucocytosis seen in amebic dysentery is absent in infections with the strongyloides, and it is not likely that other chronic diarrheas and dysenteries will be confused with this disease, by those who keep the features already mentioned in mind.

TREATMENT.

The treatment consists in light diet, rest and tonics, with occasional heavy doses of thymol or Felix mass, followed by a purge. The milder cases are easily controlled by treatment, the most severe difficult to influence in any way. While the patient may be relieved of nearly all unpleasant symptoms, the complete eradication of the parasite is a matter of some difficulty. I know of no case, at present, where this has been accomplished. No medication will cause the parthenogenetic mother worm to appear in the stool, and until this occurs treatment can not be considered successful.

After the patient has been relieved of his more acute symptoms by ordinary measures of rest and diet, thymol may be given on an empty stomach, preferably in the morning; 10 to 12 grains given in capsules every five minutes for an hour, and following this, a saline, watching carefully for any symptoms of depression or collapse induced by the thymol; male fern may be used in place of thymol, given in a dram dose, followed one hour later by another dram. Between the periods of more active medication tincture of ferric chlorid may be given as a tonic. Gin has also been recommended.

I wish to recommend at this time, on purely theoretical grounds, the adoption of a more radical procedure in the treatment of this disease. I think we are justified in these cases in endeavoring to effect a radical cure at the cost of considerable patience, or even risk to the patient. It is true that we can easily control the majority of cases met with in this country by appropriate treatment, but, aside from the danger to life, there are other considerations which we have to meet. The disease imposes considerable disability on patients suffering from it, and it falls especially hard on those who earn their living by manual labor, as the frequent discharges interfere with any continuous employment. Again, in debilitated persons, especially the tuberculous, there is considerable indirect risk of life. Intestinal malassimilation is always a serious feature in this disease, and may result in developing a case previously latent, or in converting the chronic into the acute form. I would advocate treatment along several experimental lines, having for their object to render the habitat of the parasite unfavorable to development. The parasite is not especially robust, and can be destroyed external to the body by trifling untoward circumstances.

The presence of air, a moderate temperature and the power of free motion in a fluid or semi-fluid nutritive medium is essential to the life of the parasite. A moderate degree of heat is sufficient to destroy it. In the endeavor to influence the parasite unfavorably we can first proceed along the lines of depriving the parasite of air; this we should be able to accomplish, practically, for several days without any unsurpassable difficulty. The method by which we should accomplish this will probably be by means of a primary purge, followed by doses of opium sufficiently heavy to arrest intestinal peristalsis. Rectal alimentation should be used during this period to further guard against the entrance of air into the intestines. With the intestine empty and collapsed, and its walls in approximation, the small quantity of air remaining will soon be lost. In order to promote the absorption of any residual air, recently heated wood charcoal may be administered with the opium. An endeavor to destroy the parasite by heat may be combined with this method. The administration of very hot fluids continuously by mouth may be combined with the preceding method. The intestine is very tolerant of hot liquids, and the temperature required is not great. In order to avoid the discomfort incident to swallowing very hot liquids, they may be administered by a stomach tube combined with some agent to facilitate the rapid passage of the fluids into the duodenum. These two methods may be combined in a procedure such as given below:

After a twenty-four hours' fast the patient is given two drams mag. sulph. in two pints of very hot water, one drop of croton oil is added to insure prompt passage from the stomach. The solution of mag. sulph. may be repeated again in an hour without the croton oil. After the patient has been thoroughly purged, opium is given by the mouth, combined with powdered charcoal, after which it is administered by rectum as long as may be considered necessary. Arresting of all movements for a week should be all that is necessary in the usual case. At the end of the stated period the solution of mag. sulph. is administered in the same manner.

PROGNOSIS.

The prognosis of the disease has already been discussed under the treatment.

I wish in conclusion to express my thanks to Dr. Thayer and Dr. Strong for the use of previous reports on this subject, both of whom I have freely quoted, and from the former of whom I have largely modeled my report. Also to Dr. Atkinson for valuable advice and assistance in the case.

DISCUSSION.

Dr. Charles Wardell Stiles, Washington, D. C.—This parasite of Cochin China diarrhea must be more common in this country than is commonly supposed. It is not only found about Baltimore, but four cases are reported from Washington and three cases from California. The life conditions necessary for this parasite are much the same as are necessary for the uncinaria. We can expect this nematode to correspond more or less generally to the geographic distribution of uncinaria.

With regard to the diagnosis, there are one or two pitfalls. We may find small worms and make the mistake of thinking that we have to deal with Cochin China diarrhea. Mistakes of this kind have been made by European and Asiatic physicians when they state that uncinaria runs through the same double cycle of development shown by strongyloides. Looss reported that he found in the feces rhabditiform embryos which were scarcely to be distinguished from the diarrhea worm. Various rhabditiform embryos are not uncommon in water and vinegar, but which have no connection with strongyloides, yet they may be found in the stools. If you wish to make a diagnosis of Cochin China diarrhea the simplest way is to find several rhabditiform worms in the feces; then a few of them should be raised to the free adult stage.

Another pitfall is likely to occur in the southeastern states. Occasionally the embryo of the American hookworm develops while the egg is still in the uterus of the female; and occasionally we may find in the feces of hookworm patients eggs with fully-developed rhabditiform embryos. If the egg shell is broken the rhabditiform embryos can then be distinguished from the strongyloides embryos only with difficulty and with the most careful examination.

Another pitfall is this: The pin worm (oxyuris) is viviparous, and here the embryos simulate the strongyloides embryos. In the tropics and in the Philippines strongyloides is a very common parasite, and we are likely to find cases of Cochin China diarrhea in almost any part of the country where we are dealing with soldiers who have served in the tropics. I do not know what treatment we are going to use. The results with thymol are not at all satisfactory.

Dr. Allen J. Smith, Galveston, Texas—This worm, I am satisfied, is a more common human parasite in the southern part of the United States than is at present realized. I have personally encountered examples of the embryo a number of times in the stools of patients from Galveston, but passed it by as a matter of interest rather than of importance, accepting in this idea the statements usually made in the text-books as to the rôle of this parasite in pathology. I must here (and I do so without hesitation) acknowledge that it was due to this mental attitude of mine that Dr. John T. Moore, Galveston, refrained from publishing an instance of the presence of the embryonic worms met in one of his patients a number of months ago, at a time when such publication would have ranked high in order of priority of record of the parasite in this country. I had seen the worms before; had not recognized in the cases presenting them any definite clinical features referable to these zoöparasites; was aware that the original idea that they were the cause of Cochin China diarrhea had been abandoned and that writers generally were agreed that they were of little or no importance in pathogenesis. Under this impression I spoke of the matter lightly when Dr. Moore brought to the laboratory of pathology in the University of Texas his specimens for identification; because of which Dr. Moore refrained from reporting the case until some months later, when his interest was again aroused by Dr. Thayer's excellent discussion of the same parasite in the *Journal of Experimental Medicine.* Since Dr. Moore's case two others have been brought to my notice from the wards of Sealy Hospital.

On such reasons I would base my confidence that the parasite is probably frequent in the southern tier of states of this country. In the cases which I have known the discovery of the worms has been in a general way accidental, and there has been nothing to make them seem of actual clinical importance. In one of these cases, however, at the time of the examination, there was a decided diarrhea, in which possibly the strongyloides may have had some influence; but the parasites persisted after the subsidence of the diarrhea—and aside from this individual circumstance I have had no reason to think of the anguillula as of any pathogenic significance.

Dr. A. P. Ohlmacher, Gallipolis, Ohio—Some five months ago my interest in this subject was aroused by the discovery of *Strongyloides stercoralis* in an epileptic idiot, 16 years of age, one of the inmates of the Ohio Hospital for Epileptics. He was a native of Cleveland, Ohio, where he had lived at home until admitted to our institution, Jan. 7, 1902. There was no history of diarrhea before admission. His death occurred Nov. 23, 1902, from exhaustion. A diarrhea appeared three months previously, and three days before death the stools were blood-stained. He was confined in one of the closed wards. I examined the contents of the large intestine during the progress of the autopsy, finding the strongyloides; and subsequent search through the intestinal tract exhibited the worms from the pylorus to the anus. Both the adult female worm, eggs and developing embryos were found. My tentative diagnosis of strongyloides was confirmed by Dr. Chas. Wardell Stiles of Washington, who kindly examined some of the material from this case. This additional case, the first in the middle west of the United States, seems to emphasize the point made by Dr. Stiles and others in the present discussion—that the worm of Cochin China diarrhea is not a rare parasite in this country.

Dr. J. T. Moore, Galveston, Texas—My first case was discovered in August, 1901, the patient appearing at the outdoor clinic of the John Sealy Hospital complaining of severe diarrhea, with cramps in the abdomen. He was rather nervous and slightly anemic. He was a mulatto. He had served in the Spanish war in Cuba. The stools were examined and the parasite of *Strongyloides intestinalis* was found. The specimen was submitted to Dr. Smith, who told me it was *Strongyloides intestinalis.* I remembered hearing of Dr. Thayer's case spoken of in Washington, I believe, at the American Congress of Physicians and Surgeons. Dr. Thayer kindly sent me a monograph of his cases. I reported my case to the medical society in June, 1902, and it is now in the hands of the American Medicine Publishing Company, the manuscript having been corrected. Recently I sent Dr. Price a synopsis of the case. I have now two other cases to be reported that I have since seen in the medical wards of Sealy Hospital. This parasite is, I believe, of common occurrence in Galveston and vicinity. I recently had another case under observation in which I saw both the rhabditiform and filariform parasites. I have never been able to secure the eggs of the strongyloides, although I have made cultures several times. I have seen many cases of uncinariasis.

THE SURGICAL TREATMENT OF UNDESCENDED TESTICLE.

A FURTHER CONTRIBUTION.[*]

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CHICAGO.

At the Columbus meeting of the American Medical Association I read, before the Section on Surgery and Anatomy, a paper entitled "Operation for Undescended Testicle and Congenital Inguinal Hernia," published in THE JOURNAL of the A. M. A., Sept. 23, 1899. Since that time I have had the opportunity of operating on a further series of cases, representing practically all the varieties of this malformation and have made some improvements, made necessary by difficulties occasionally met, which make operative reduction of the misplaced testicle possible in almost all cases; and places, I believe, the operation in a position where it should be accepted as a standard surgical procedure.

A further reason for again presenting this subject is the fact that a number of my colleagues have informed me that they have had difficulty in understanding and in carrying out the operation which I recommended, and I have felt that a series of plates illustrating the various steps of the procedure might make the matter clearer. The plates which I submit are sketches from life of the various steps of the operation.

I am inclined to believe that where an operator fails to succeed it will be due to the lack of that anatomic knowledge which he must possess to enable him to unravel the shortened structures, and at a stroke of the knife and in half an hour imitate the normal descent of the testicle. I regard the operation as one of the most interesting examples of applied anatomy.

It will not be necessary here to review the normal descent of the testicle. Figure 1 shows graphically this descent: A. The first position of the testicle below the kidney and behind the peritoneum. B. Passing through the canal. C. In the scrotum, with open vaginal process, so that the general peritoneal cavity and the future tunica vaginalis are still continuous. D. The vaginal process obliterated, the general peritoneal cavity shut off from the tunica vaginalis. There is one fact in connection with the descent of the testicle which is of importance in the operative reduction and which is generally not known or misunderstood, and that is that long before the testicle descends through the canal the vaginal process of peritoneum has preceded it, lying in front of the gubernaculum testis and reaching into the scrotum. The idea so prevalent among medical men that the testicle drags down a process of peritoneum in its descent is an error. I have found in all my cases, even where the testicle is well within the abdomen, a large sac of peritoneum, passing through the canal, occupying the space in front of the external ring and passing down toward or into the scrotum.

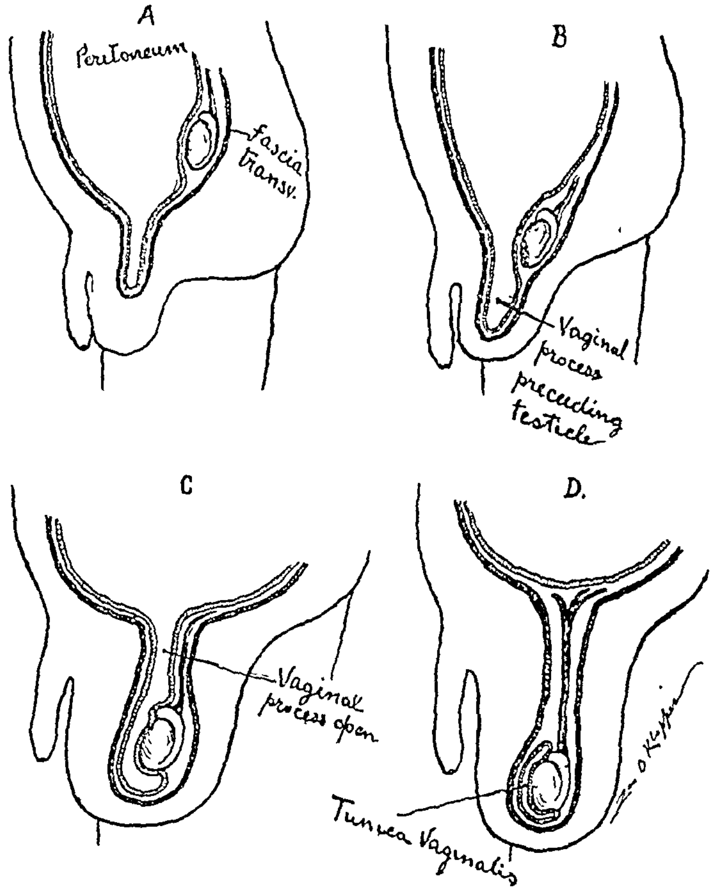

Figure 1.

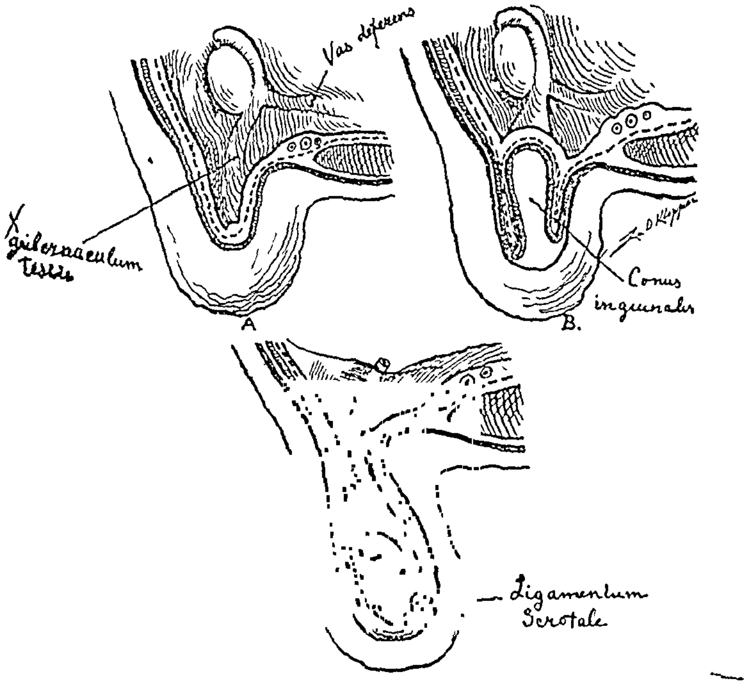

Figure 2.

Figure 2 shows graphically the descent of the testicle in three stages, and shows the process of peritoneum and the gubernaculum testis preceding the testicle in the scrotum.

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[*] Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. A. J. Ochsner, J. E. Moore and De Forest Willard.

For clinical purposes, we may divide the malformations in connection with the descent of the testicle into:

1. Simple failure of the vaginal process to close, giving us the picture of congenital inguinal hernia, or at least a potential hernia.
2. Incomplete closure with such conditions as hydrocele of the cord.

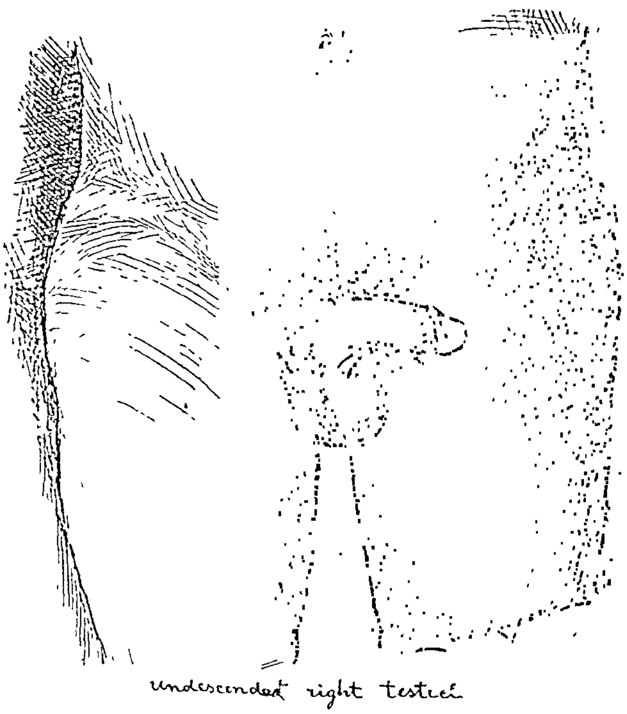

Figure 3.

3. Undescended testis which presents four types: (a) in the abdomen, in about its original position; (b) at the internal ring; (c) in the canal; (d) external to the external ring.

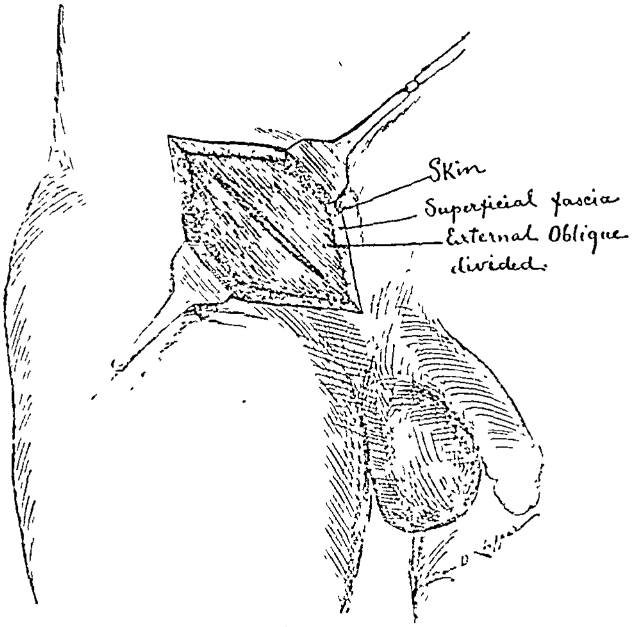

Figure 4.

4. Misplaced testicle. (a) in the perineum; (b) on the thigh below Poupart's ligament.

Undescended testicle occurs in at least 1 in 500, as shown by the statistics of the Austrian army, obtained from an examination of recruits. The malformation is a serious one, as it brings with it both mental and physical distress and it deserves more consideration from the medical profession than has been given to it. Even to-day almost no mention of the condition is made in our standard text-books on surgery, and the idea is generally prevalent among medical men that nothing can be done for the cure of the conditions, except removal of the testicle, if it causes trouble.

To-day, I believe the rule should be to operate and transplant to its normal position in the scrotum every undescended testicle which can be palpated. Those which can not be palpated should be operated on if they give rise to symptoms, or are complicated with hernia. Those which can not be palpated and do not give rise to physical distress, should be operated on and placed in the scrotum, if the malformation is the cause of mental distress to the patient. There are but few cases of undescended testicle where an operation is not indicated.

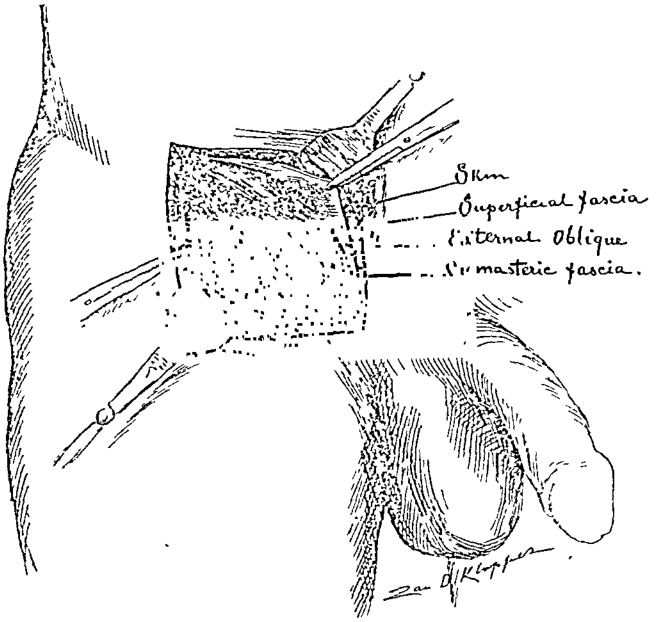

Figure 5.

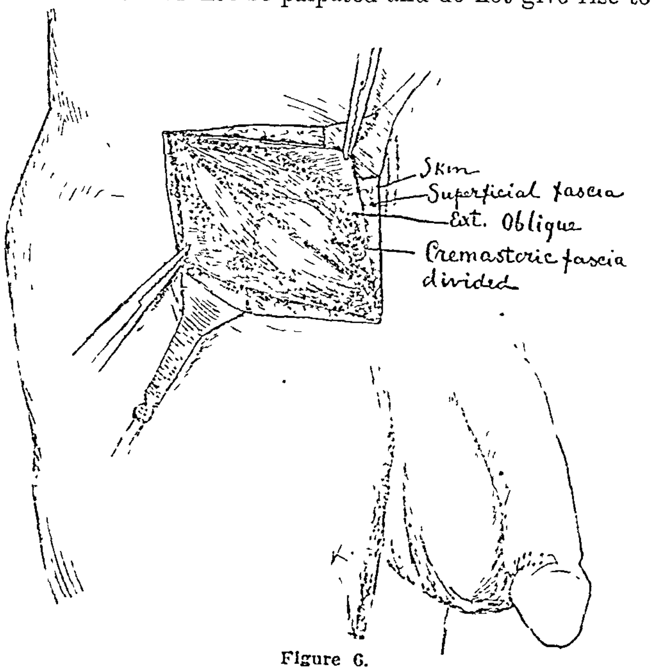

Figure 6.

The dangers and discomforts of the condition of undescended testicle are much greater than those of the ordinary inguinal hernia and call more urgently for operative relief. These dangers are, briefly, (1) the actual or potential hernia which is always present; (2) greater liability to, and greater danger from, inflammation of the testicle in its abnormal position; (3) injury to the organ from its exposed position, both external injury and injury from muscular contraction, such as coughing, lifting, etc.; (4) the greater danger of malignant degeneration (there can be little doubt that these undescended testicles are more often the seat of malignant disease than are normal testicles); (5) mental distress, due to the existence of the condition. This is an important factor in many cases. We do not hesitate to give our patients, suffering from hernia, the benefits of an operation for radical cure, and we should not refuse the cryptorchid the benefits of a surgical procedure, which, if properly performed, is as safe and as sure as a Bassini hernia operation and more urgently called for.

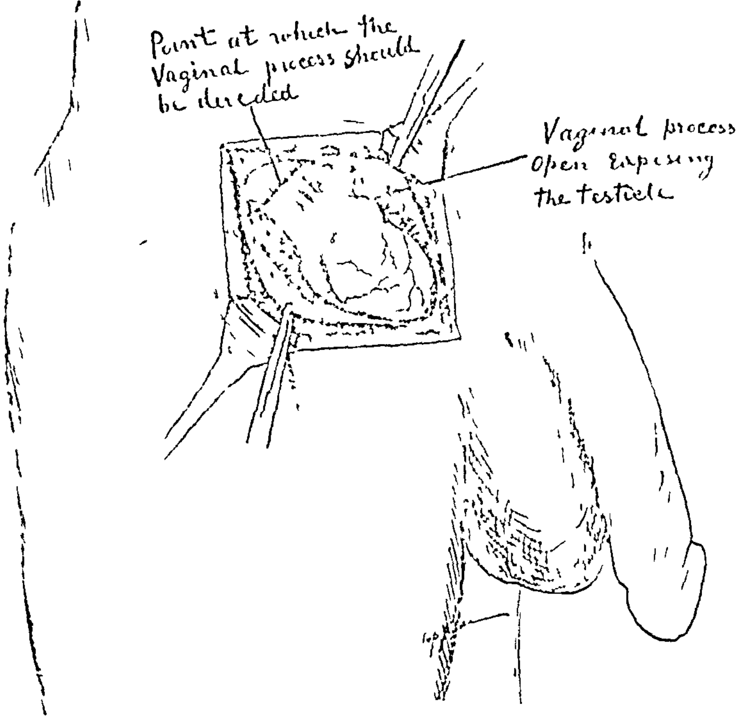
Point at which the Vaginal process should be divided
Vaginal process Open exposing the testicle

Figure 7.

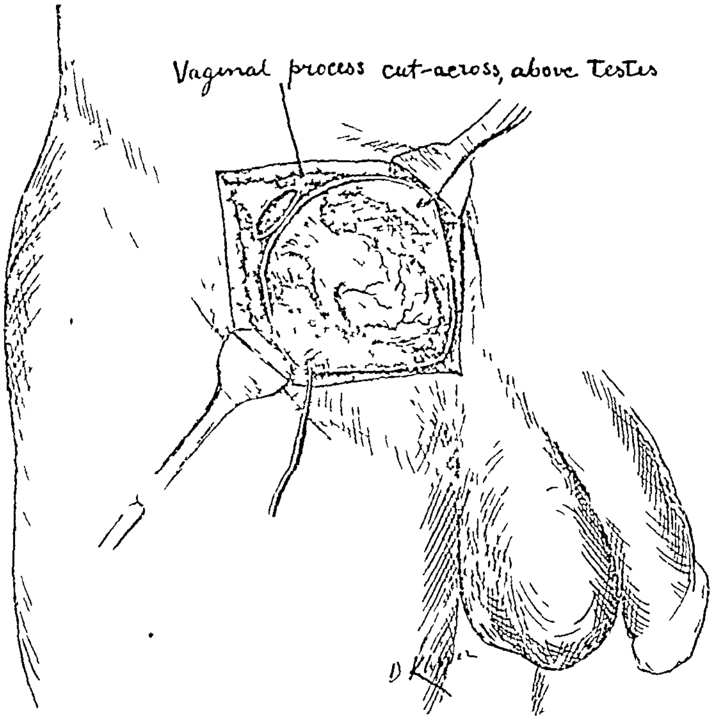

Figure 8.

The first work of value in this line was done in 1881 by Max Schuller, and reported in this country in the *Annals of Anatomy and Surgery*. Schuller recognized the vaginal process of peritoneum as the chief factor which prevented the drawing of the testicle down into the scrotum and the factor which drew the testicle back into its old position, after operation. He advocated division of this vaginal process and stitching the testicle into the scrotum.

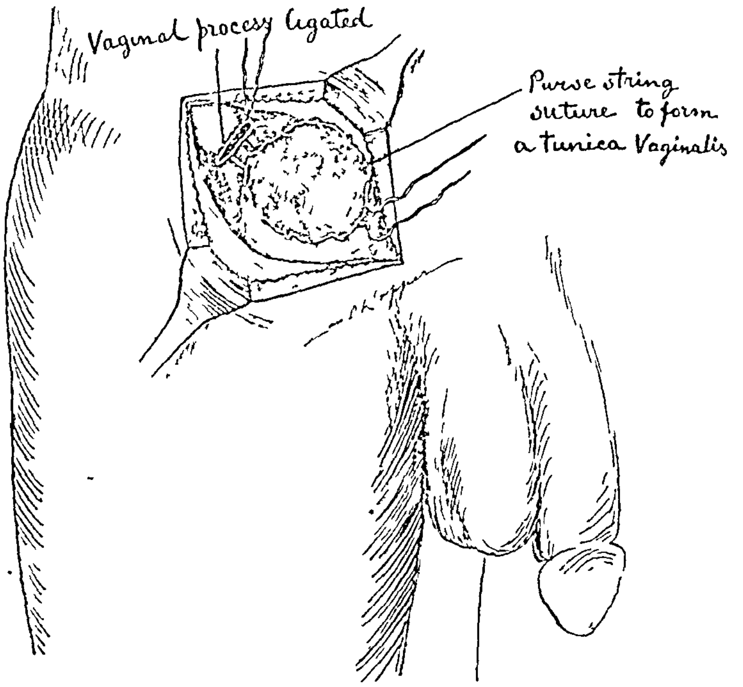

Figure 9

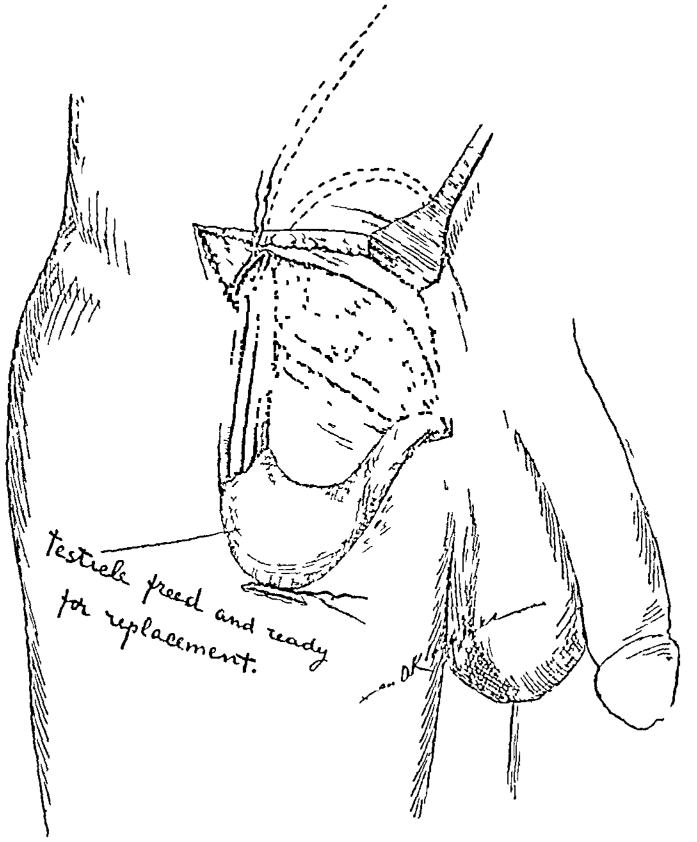

Figure 10

Schuller's work was a distinct step in advance, but his operation did not go far enough and has but a limited field. The operation which I have developed meets, I think, the indications better and has a much wider field of usefulness. I have developed the operation so that testicles well within the abdomen, which have never been palpable, can be brought down and retained in the scrotum. Before describing the technic, which is the special purpose of this paper, I desire to say a word in regard to the age of selection. At what period of life, if we can choose, should these patients be operated on?

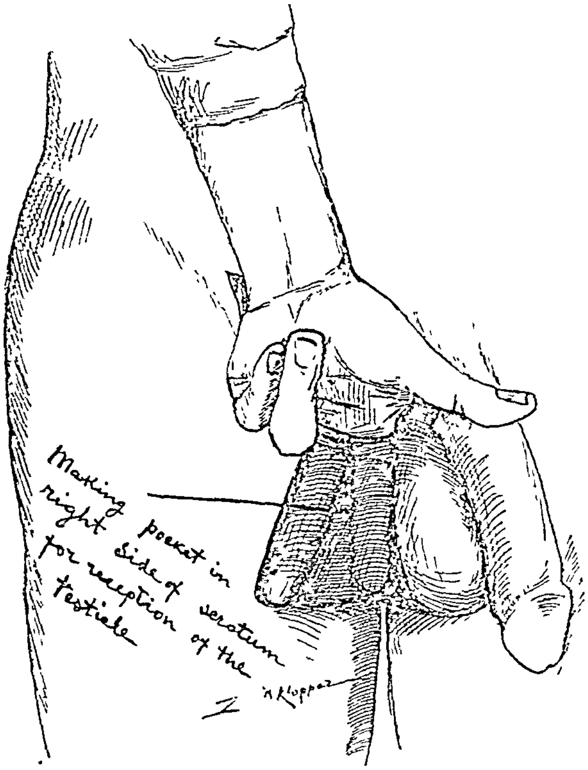
Making pocket in right side of scrotum for reception of the testicle
A Klopper

Figure 11.

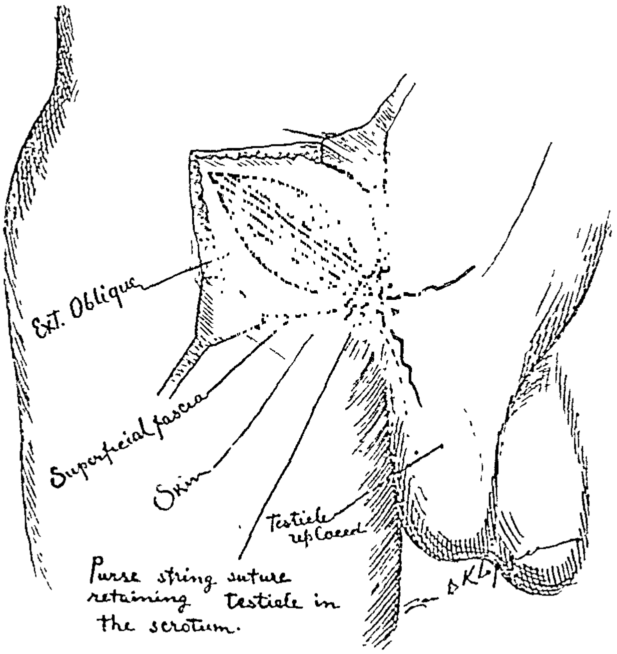

Figure 12.

In my first paper, I advocated waiting until after puberty, on the ground that some of these testicles descended during puberty and the malformation was cured sometimes even without an accompanying hernia. I have changed my opinion decidedly on this point, because I believe that this descent at puberty is a rare occurrence, at least, that it happens in but a small per cent. of the cases, and again, I believe that it would be far better to have the testicle in the scrotum when the changes incident to puberty take place. I now, therefore, advocate the performance of the operation before puberty, when possible, I think best, between 6 and 12 years of age.

DESCRIPTION OF THE OPERATION.

In operating on undescended testicle, when the organ is palpable, as in Figure 3, that is, in the canal or external to the external ring, the following technic should be pursued:

Make an incision three inches long over the canal. This should never involve the scrotum, or extend farther inward or downward than the external ring. This incision should divide skin and superficial fascia and the external oblique over the inguinal canal (Fig. 4).

The divided aponeurosis of the external oblique is drawn to each side and the cremasteric fascia is exposed (Fig. 5).

The cremasteric fascia and the thin underlying transversalis fascia is freely divided parallel with the canal (Fig. 6).

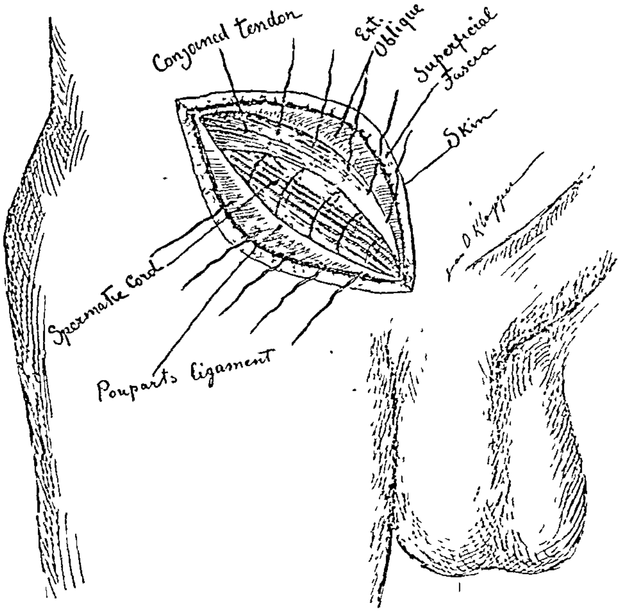

Figure 13.

This exposes the large peritoneal sac containing the testicle and continuous with the general peritoneal cavity. This sac is opened and the testicle exposed to view (Fig. 7). Frequently a projection of the omentum is found in the sac.

It is not necessary to make as large an opening into the sac as is shown in Figure 7. The peritoneum is then cut across at the point shown in Figure 7, and is carefully separated from the cord which lies beneath.

Figure 8 shows the vaginal process of peritoneum, cut across above the testicle. The vaginal process is then ligated, as in the neck of the hernia sac in a hernia operation, care being taken to ligate well up at the internal ring. That portion of the peritoneal sac in contact with the testicle is closed with a purse-string suture, and thus forms a tunica vaginalis for the testicle (Fig. 9). The testicle is now lifted out of its bed, and the cord is gently pulled on, so as to lengthen it as much as possible. In doing this, shortened bands of connective tissue will be seen as tense bands in the cord, and these should be torn across with tissue forceps. The cord should thus be stripped of all the surrounding fascia, leaving nothing but the vessels and the vas deferens. When this has been accomplished the spermatic vessels and the vas, which lies behind the posterior layer of peritoneum of the abdominal cavity, should be separated from the peritoneum by careful blunt dissection, with the finger introduced into the abdominal cavity. The spermatic vessels will be found passing upward and inward, and the vas downward and inward from the internal ring, and this divergence can be plainly seen. The cord should be so lengthened by these maneuvers that the testicle can be layed on the thigh three or four inches below Poupart's ligament (Fig. 10).

With blunt dissection with the fingers, a large pocket should be made in the scrotum for the reception of the testicle (Fig. 11), and the testicle dropped into it, where it should remain without tension on the cord. A pursestring suture should now be placed at the neck of the scrotum to retain the testicle in position. This suture should pass through the superficial fascia and the external oblique on both sides of the incision; that is, both the internal and external pillars of the external ring, and above the cord. When this suture is tied, the testicle is securely retained in its scrotal pocket (Fig. 12). The incision is then closed, as in a Bassini operation, except that we do not transplant the cord; that is, we bring the conjoined tendon and Poupart's together above the cord (Fig. 13). We then suture the incision in the external oblique with continuous suture (Fig. 14), and, lastly, close the external wound. I have employed formalin catgut for the buried sutures and horsehair for the skin sutures. A fairly firm, not uncomfortable, compress over the canal, retained with spica bandage, completes the operation. The horsehair sutures are removed on the tenth day, the patient allowed on his feet on the fourteenth day.

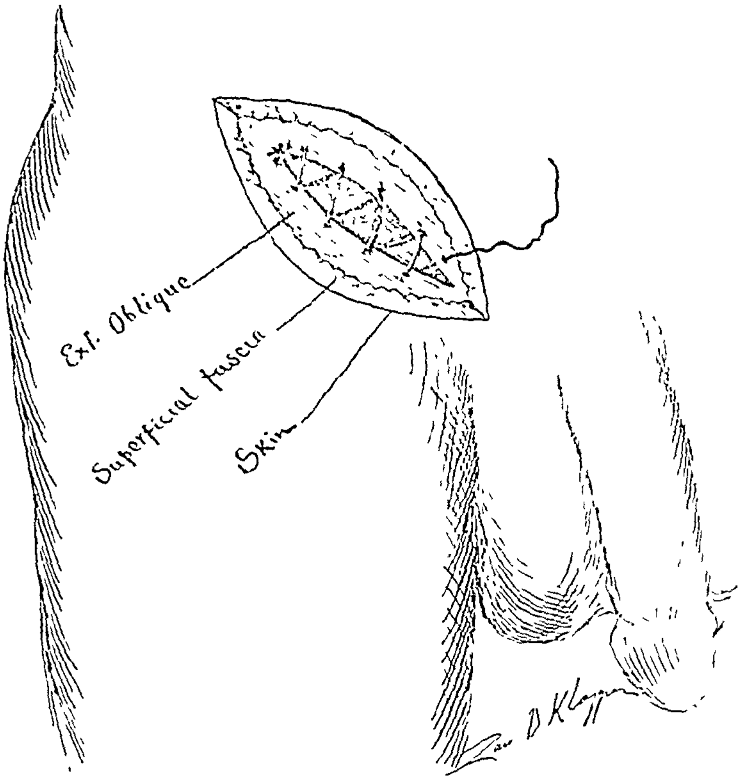

Figure 14

The technic I have described will answer in a large majority of cases, but I have found by experience that in operating on cases in which the testicles are not palpable, and are well within the abdomen, and in some few cases when the testicles are palpable, that I could not, by the method described above, free the testicle sufficiently to bring it into the scrotal pocket, without tension. In analyzing the facts in these cases, I found that the tense structure which prevented reduction were the spermatic vessels, and not the vas. The spermatic vessels run in almost a straight line from the internal ring to the abdominal aorta and the ascending vena cava and renal vein. The vas, on the other hand, makes a long sweeping curve in its course from the internal ring to the base of the bladder. The artery of the vas accompanies it and follows this same curve. The vas is the essential organ in the spermatic cord.

The question which confronted me in some of my difficult cases was whether the spermatic vessels were structures essential to the integrity of the testicle, or whether they could be safely sacrificed, in those cases in which the testicle could not be sufficiently freed without dividing them.

Reasoning from a clinical experience of more than a hundred varicocele operations in which I had removed all of the structures of the cord, with the exception of the vas and its vessels, and had never seen gangrene of the testicle, or any apparent interference with its nutrition, I concluded that the spermatic vessels could be safely sacrificed in those cases where it is necessary to divide them in order to bring the testicle well down in the scrotum. I have, therefore, in a number of cases ligated the spermatic vessels at two points and divided between, as shown in Figure 15, and have had no evidence of interference with nutrition; in fact, these have been among my most successful cases, from the standpoint of clean and rapid recovery.

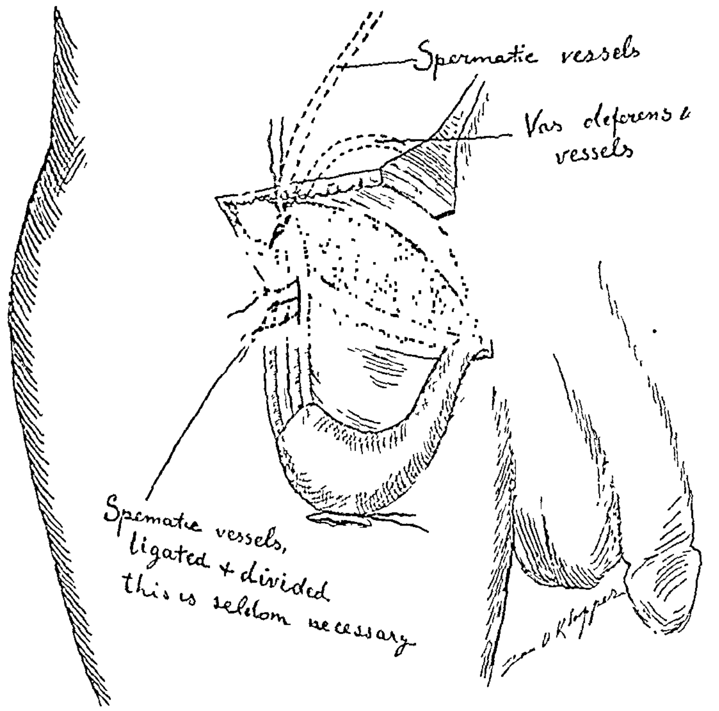
Spermatic vessels
Vas deferens & vessels
Spermatic vessels, ligated + divided this is seldom necessary
D Klopper

Figure 15.

After my first operation of this kind I found that J. Griffith,[1] writing on the effects on the testes of ligature of the spermatic artery and spermatic veins, and of both artery and veins, had demonstrated that these vessels could be sacrificed without any permanent interference with the function of the organ.

The explanation is this: The testicle is supplied by two arteries, the spermatic from the aorta, and the artery of the vas from the inferior or middle vesical. These anastomose freely; neither are terminal arteries, and either can be sacrificed without endangering the vitality of the testicle.

Since adopting this seemingly radical, and yet perfectly safe, sacrifice of the spermatic vessels, I have had no difficulty in bringing the testicle down into the scrotum, even in cases where it was well within the abdominal cavity, and where it had to be hooked out of the abdominal cavity and held with some tension to keep it out beyond the internal ring, until the shortened structures were divided.

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[1] Journal of Anatomy and Physiology, vol. xxx, p. 81, 1895.

I desire to urge the general adoption of operative treatment for undescended testicle. By the operation the testicle can be placed in its normal position in the scrotum, where it certainly has a better chance of developing into a normal organ than it has if it is allowed to remain in its abnormal position. *At the same time,* the patient is cured of the actual or potential hernia, which is always present, and is freed from the dangers and discomforts which result from the malformation, and this can be accomplished by an operation which is as safe and as sure as the operations for radical cure of hernia, and, to my mind, is much more urgently called for.

The operation requires of the operator a very clear conception of the normal anatomy of the region and the abnormal anatomy of the malformation, but otherwise presents no greater difficulty than does a Bassini hernia operation.

DISCUSSION.

Dr. W. T. Eckley, Chicago—I shall speak on four points: (1) The diaphragmatic ligament of the primitive kidney; (2) the gubernaculum; (3) the inguinal ligament of the primitive kidney; (4) the probable factors concerned in cryptorchism. At an early period the mesonephros and indifferent sexual gland are in a retroperitoneal bed of mesodermic tissue. That portion of the mesodermic tissue cephalad of the sexual gland is called the diaphragmatic *ligament of the primitive kidney;* the portion caudad of the gland is the inguinal ligament; while the part corresponding to the gland becomes the mesorchium or mesovarium, according to sex. With the disappearance of the primitive kidney, the diaphragmatic ligament atrophies. *The inguinal ligament develops the gubernaculum.* The gubernaculum is attached, cephalad, to the sexual gland, and its inverting peritoneum, caudad, to the inguinal region and bottom of the scrotum. By traction it produces a test-tube-like processus vaginalis—a preformed structure for the reception of the testicle. The emphasis placed on the occurrence, together with cases reported by the essayist of congenital hernia and cryptorchism in the same individual, seem to clear up a hitherto controverted anatomic question, viz., whether the testicle and processus vaginalis descend at the same time. In one case at least I can corroborate Dr. Bevan's opinion that the processus vaginalis is preformed for the reception of the testicle. By a strange hypervivacity the gubernaculum may reduce to processes of peritoneum, one of which favors the occurrence of infantile hernia.

Two factors figure conspicuously in the causation of cryptorchism: (1) the spermatic vessels; (2) an unobliterated diaphragmatic ligament of the primitive kidney.

Dr. Carl Wagner, Chicago—It is not only from a psychologic standpoint of view that these cases of undescended testicle appeal for relief, but also from the anatomic and pathologic points of view, for there may be serious dangers which may be obviated through such surgical devices as Dr. Bevan's. In *this connection I wish to report a case of undescended testicle,* in which this condition is responsible for the loss of one testicle. It took place in a young boy, who fell about fifteen feet. He complained of severe pain in the left inguinal region. I saw the boy the second day after the accident and found a swelling the size of a small walnut in a region corresponding to the seat of the internal ring. Further examination disclosed the fact that there were no testicles contained in the scrotum. Thus I concluded that the swelling contained the undescended testicle which through the force of the fall had been thrown into the inguinal canal. On opening up, I found the *testicle* tightly encircled by the pillars of the internal ring, around its middle, and gangrenous. It became necessary to incise the internal ring upward in order to free and ligate the testicle off, which could not be moved downward the least bit.

I feel very much encouraged by this paper to operate on undescended testicles, and thus prevent dangers of similar character.

Dr. Willard Bartlett, St. Louis—There is a certain pathologic condition which must guide us as to the time at which this operation should be performed. What Dr. Bevan has said about doing the operation early is undoubtedly true. The undescended testicle is of value to us only to facilitate the development of the child. It is known that the boy who possesses *two undescended testicles develops into the manly type,* whereas the infant that is robbed of two normal testicles develops into an effeminate type. Knowing as we do, then, that the undescended testicles are of value only to further the development of the child, and knowing as we do that the infant develops into the girl type if the testicles are removed, it would seem that they should not be removed in the early years. On the other hand, the danger of malignant disease from undescended testicles after they are reduced is just the same as though they had been left in the abdomen. Consequently the logical conclusion must be drawn that such a testicle must be removed entirely, if you do anything to it after about the age of 18 or 20 years, whereas, as Dr. Bevan has said, the psychologic considerations would demand that they be brought down in the scrotum, if anything be done with them early.

Dr. A. J. Ochsner, Chicago—This paper is of very great importance, because up to the time at which Dr. Bevan first wrote on this subject the general tendency was to substitute the removal of the organ *for its replacement. In the former* paper Dr. Bevan emphasized the fact that the reason why the former attempts at replacement of the testicle had been unsuccessful was because the organ had not been loosened. He showed how the *organ was held by a curled-up condition* of the tissues of the cord, and that by unfolding these tissues it was possible to place it in the scrotum. Since hearing this paper read at the Cincinnati session of this Association, I have many times performed this operation and, except in the first case, *in every instance with perfect satisfaction.* In the first case one point made by Dr. Bevan in his original paper had escaped my attention, which I learned later in looking up the paper, namely, that the organ may be almost perfectly loose and still be held by the peritoneum. The tissues of the cord may be relatively loose and yet there may still be a certain degree of tension. Realizing this degree of tension which has been described, I have always performed the Ferguson operation in preference to the Bassini, making use of the principles brought out by *Dr. Bevan and, with the exception* of the first case, with perfect satisfaction.

Dr. William L. Rodman, Philadelphia—It has been my lot to see a great number of cases of this condition, and I feel it is better to incorporate the testicle in the scrotum than it is either to excise it or to leave it in the abdominal cavity, for three reasons: The first is that the patient would, of course, very much rather have the testicle in its normal place, and the moral effect is very much better. Second, the place for the testicle is where it is least likely to undergo *any form* of malignant disease, and certain it is that all such organs are *much more likely to undergo malignant change if left* in the abdominal cavity than if they are placed in their normal position. I know some one has denied this, but I think the evidence is absolute that the undescended testicle is prone to undergo degenerative change. The third reason is that the testicle in the inguinal canal can expand and grow and develop in a way that it could not if it remained in the abdomen, and that is the chief reason why these organs are practically without function, and why a person with two undescended testicles is practically impotent. Naturally, there will be a much better chance for the development of the testes if the operation is done early, as Dr. Bevan says, and not after puberty. I think undoubtedly he was correct in changing his position and saying that these operations should be done before puberty. The last case that I operated on was a child about 8 or 10 years old. He was the son of a physician living in New Jersey. He had become very much concerned about the future of the child, and rightly, I think, insisted on the operation being done early. In one case which occurred in a young man I was able to bring both testes down and anchor them in the scrotum in the way indicated by Dr. Bevan. I am glad to say that the results have been very good, although I believe the testicle, even if brought down into the inguinal canal, will never become functionally active.

Dr. Arthur Dean Bevan, Chicago—In regard to the question raised by the last speaker, I think that we must always be guided by the conditions which are present. The operation is performed, of course, with the idea of giving relief to the individuals who have undescended testicles. Of course, these cases are almost always complicated by hernia, and the point I wanted especially to make is that by this method we have only to bring the testicle down and do not have to apply any tension. My experience has been rather limited in this work, about twenty cases, but I have not seen more than one where we could not bring the testicle down without any tension.

APOPLEXY.

T. B. GREENLEY, M.D.
MEADOW LAWN, KY.

On account of some peculiarities in the way of symptoms, I report a case of apoplexy.

A female, aged 81, was stricken Sept. 10, 1902, with all the symptoms of cerebral hemorrhage. She was unconscious and paralyzed, which condition continued nearly twenty-four hours, when consciousness returned. In a short time she could move her left foot, and we soon discovered that she had hemiplegia of the right side.

In a short time she could use her left extremities, so that she could feed herself, lying on her right side. She remained in bed about two months, when we allowed her to sit up a few hours at a time in the morning and afternoon.

In three months she was able to walk with a little assistance. She now ate her meals at the table, and sat up nearly all day. Her appetite and digestion were nearly as good as before she was taken sick.

At first we had no hope of her recovery on account of her advanced age and the severity of the attack, but now she was so much improved we began to entertain great hopes of her final recovery.

She could not use her right hand in feeding herself, but could stoop down and pick up light things, such as a paper, requiring but little grip.

In about four months from the time of attack, she could pull herself up and walk alone through the rooms and hall, which she frequently did during the day for exercise.

She was perfectly conscious of her surroundings and recognized friends who called to see her; but she never recovered the ability to command language to express her feelings, or to converse with her friends. She endeavored to talk, but could speak very few intelligible words. This is one of the rare symptoms attending apoplexy.

There is frequently inability to talk immediately after an attack due to paralysis, but I have not met with a case where this condition existed after regaining the use of the muscles of the tongue, etc. One singularity in her case attended this condition, which was, if you requested her to count, she could do so up to any number, and enunciate the words distinctly. She could also repeat the letters of the alphabet very distinctly. This seemed unaccountable when we could not understand a word she tried to say when endeavoring to talk to her friends. This condition might perhaps be accounted for on the ground that she knew the alphabet and numbers by heart, but was unable to originate language in the way of conversation.

The extravasation of blood in the brain must, in her case, have compressed the origin of the nerves, the function of which enables us to command language.

About ten days before her second attack she began to lose the use of herself, and could not walk without some assistance, although her appetite remained as good as usual, still eating at the table.

On the night of February 10, just five months after the first attack, she had the second. I was sitting by the bedside when it came on. I noticed several minutes before that the blood vessels about the head and face were congested; and as she seemed to be losing consciousness, I felt certain another attack was approaching. In a very short time she had a slight spasm, a mere sudden jerk; and she was perfectly motionless and unconscious. She never regained consciousness or any muscular action, and lived only thirty hours.

I spoke, in the outset, of some peculiar symptoms attending this case. I have mentioned one, her inability to command language to express herself in trying to talk with her friends, and the ability to repeat words she had been familiar with all her life, such as counting numbers and repeating the letters of the alphabet.

Another unusual symptom was the change in her habits for about a month before she was stricken down. She was always a great reader and talker, but for several weeks before she was taken ill she had but little to say in the way of conversation and she read but little. Before this, she always read some in the Bible every day and was fond of reading religious papers, but now she would only read a paper a few minutes and lay it down. This change in her habits was remarked by her friends, but, of course, could not be accounted for. From the history of the case I feel satisfied that there was some change then taking place in the brain substance.

The results of apoplexy vary according to the amount of blood extravasated into the brain substance and amount of pressure resulting therefrom.

Hemorrhage in the cerebellum is much more apt to prove fatal suddenly than in other portions of the brain. In fact, many cases fall and die immediately. Those who escape sudden death are afflicted with hemiplegia on the side opposite to that of the hemorrhage, the nerves decussating to the side opposite their origin. Probably half of the cases recover so they can walk, and have good use of themselves, except the hand of the hemiplegic side. Some who recover their health in every other particular never regain the proper use of the hand, but now and then a patient recovers the use of all parts of the paralyzed side. I have had two cases attended with this result. Of course this depends entirely on the amount of blood extravasated into the brain and on the severity of the attack.

The exciting causes of apoplexy are somewhat indeterminate. A person may be in an excellent state of health and be stricken very suddenly. This may occur without any premonitory symptoms or indications. It may occur while sitting, standing or walking, without mental excitement or physical effort.

But, no doubt, in some instances there exists some diseased condition of the brain, or pathologic alteration in its structure favoring hemorrhage.

Then again, the attack may occur during great mental excitement or physical exertion. Whatever may increase the circulation or retard the blood from returning from the brain may result in an attack. The treatment of such cases, of course, is simple but essential. The patient should be kept as quiet and comfortable as possible, with the head and shoulders somewhat elevated by pillows. The room should be well ventilated and kept perfectly quiet; in fact, anything calculated to produce excitement must be excluded from the patient. His diet should be light, but digestible and nourishing.

In old times venesection was practiced in such cases, and at present, if the patient is robust and stricken down in perfect health, there is no doubt that the abstraction of blood by venesection would prove beneficial. But, by doing so, we would have to revive a lost art in surgery.

It is very essential that the bowels should be kept well relaxed, so as to determine, as much as possible, from the head in the way of revulsions. The kidneys should also be kept active, in order to modify the quantity of blood in the veins.

The action of the heart should be looked after and kept in moderation. If there is apparent congestion about the head, it would be well to apply cloths wrung out of cold water and hot applications to the lower extremities, etc.

Apoplexy is much more common now than formerly. During the census year of the United States, 1900, there were 50,766 deaths from the disease; 27,059 males and 23,707 females; the proportion of deaths from apoplexy and paralysis in 1,000 deaths from all causes was 50.8; whereas, in 1890, ten years before, the corresponding proportion was 37.6 per 1,000 from all causes. In fact, there are other diseases, aside from apoplexy, which are more common now than years ago and, apparently, more fatal. We might name, and very conspicuously so, pneumonia. During the winter and spring seasons we frequently notice in the weekly reports of mortality in cities that more people die from the effects of pneumonia than from the much-dreaded white plague, tuberculosis.

Fortunately, the latter disease is not so prevalent and fatal as formerly, this change taking place within the last decade. It has decreased from 12,146 deaths in 1890 to 10,688 in 1900 per 100,000 deaths from all causes. This happy result has been brought about by the use of preventive means and a better mode of treatment.

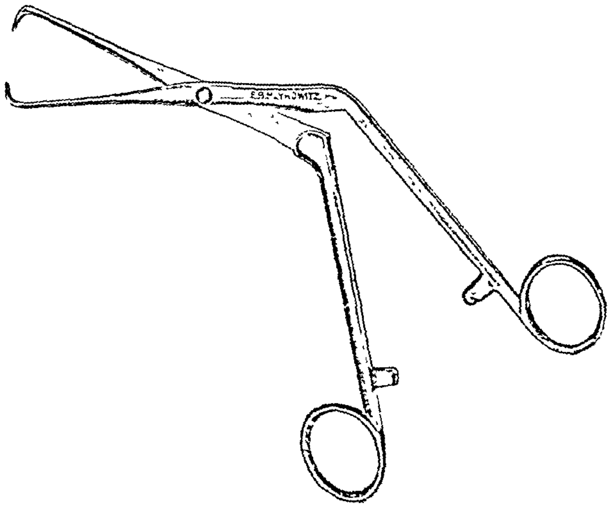
New Instruments.

A NEW TONSIL SCISSORS, FORCEPS AND TONGUE DEPRESSOR.

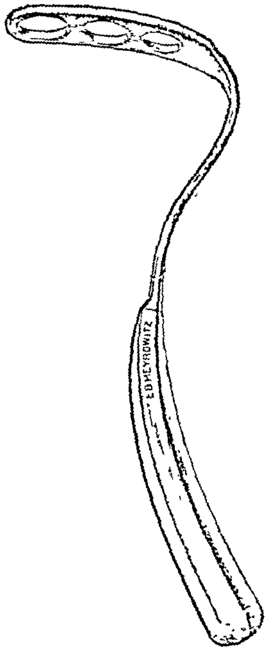
C. C. STEPHENSON,

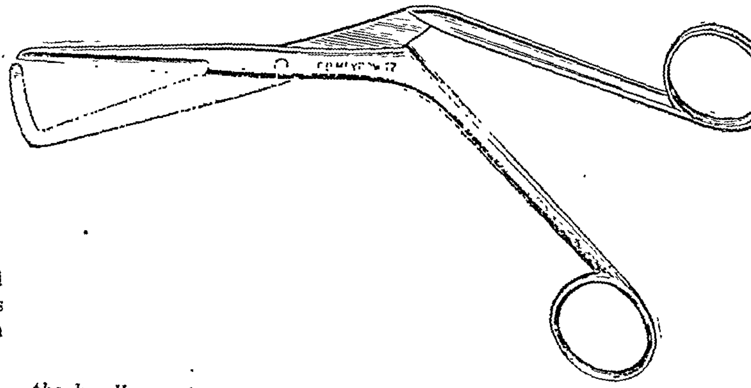
LITTLE ROCK, ARK.

The operation for tonsillotomy with these instruments, and the advantages they possess, are briefly as follows: The forceps are made to seize the tonsil, when the handles are locked with fixation ratchet; the tonsil is then drawn out, the beak of scissors is passed behind, and the gland cut off entirely, as in cutting with an ordinary scissors. The beak prevents the tonsil from slipping from between the blades of scissors, and so much of the tonsil can be removed as is desired. While holding it with the forceps the tonsil is completely under control of the operator; thus there is no receding of the gland as in the ring of a tonsillotome.



The simplicity and ease in operating commend the scissors and forceps, while with them the removal of entire gland without trouble is a desideratum. The handle of the tongue depressor is octagon, and curves outward, thus allowing an examination of the full-chested class of patients, without the end of the handle coming in contact with the chest. The blade has three holes for the dorsum of tongue to project through, which prevents it from slipping from side to side while in use.



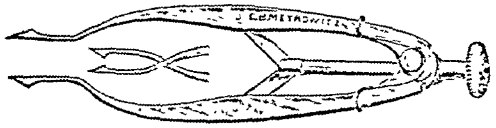


IMPROVED TENDON TUCKER.*

FRANK C. TODD, M.D.

MINNEAPOLIS.

I desire to show the Section a tendon tucker, which is an improvement over my instrument shown at the session last year. The principle of this instrument is the same, the only difference being that the adjustment is made at the distal end of the instrument, where it is more easily handled. The operation was described in the *Ophthalmic Record*, February, 1902.



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* Exhibited at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology.

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THE MILK SUPPLY OF CITIES AND TOWNS.

Milk is so important and so valuable an article of diet, particularly for children and invalids, that every measure calculated to ensure its purity and improve its quality should be most heartily encouraged. Contamination and deterioration may take place so readily that only the utmost vigilance at all steps between production and consumption will secure freedom therefrom. To act intelligently in the matter requires a knowledge of the sources of danger, as well as of the means for combating them.

The subject of the milk supply has received considerable attention of late, particularly with reference to the feeding of infants, and in several large cities—Philadelphia, New York, Chicago, etc.—commissions composed of medical men have been organized for the purpose of devising ways and means for the attainment of the desired end, and with most promising results. Essex county, N. J., has for ten years had a medical milk commission, which gives its endorsement to the milk of such dairymen as will enter into an agreement as to the care of their cows, the collection, handling, preparation for shipment and transportation and delivery of their milk. Nor has the subject been neglected by the producers of milk, who are now giving increased care to the selection and breeding of their cows, as well as to the housing and feeding of the stock, and to the details of the milking, packing and transportation; while the milkman, in his turn, has striven to supplement the efforts of the dairyman.

For the purpose of determining what has already been accomplished in the improvement of the milk supply, together with the measures that have been found efficacious, and with the object of guiding new movements or reviving old ones in the same direction, the Bureau of Animal Industry of the United States Department of Agriculture has, through the chief of its dairy division, Mr. Henry E. Alvord, and his assistant, Mr. R. A. Pearson, made a study of the milk supply of 200 cities and towns. The report, from which we have already quoted in our news columns, is based on official documents and special reports from officers charged with the enforcement of so-called milk laws and ordinances. It deals with the legal requirements as to market milk in every state and territory having laws on the subject, and includes a more or less detailed account of the milk supply of all of the 161 large cities in the United States having a population of more than 25,000 each, and also of thirty-nine selected cities and towns of smaller size.

As an evidence of the magnitude of the industry it is estimated that 1,000,000,000 gallons of milk are sold annually by the owners of producing cows for consumption in the natural state or for household purposes. It is further pointed out that so much has been said and written regarding impure market milk that many persons have become unnecessarily alarmed, and for this reason any fair inquiry into the subject that will elicit the facts in the case and suggest steps to be taken for the benefit of the industry should be welcomed by milk inspectors and consumers, as well as by milk producers and dealers. It was found that the average quantity of milk per capita provided in the daily supply, and presumably consumed, in the large cities (that is, with a population above 100,000) is 0.61 pint. In cities with a population between 50,000 and 100,000 the average consumption is 0.63 pint; in cities with a population between 25,000 and 50,000, 0.58 pint, and in cities and towns with a population of less than 25,000, 0.57 pint. For individual cities the amount varies between 0.27 and one pint. Skim milk is used by some cities in addition to whole milk up to about one-third pint daily per capita, while in other cities no skim milk at all is used. The quantity of cream used daily in the larger cities varies from 0.01 to 0.19 pint per capita. Producers usually receive on their farms from 2 to 3 cents per quart in the summer and 3 cents or more in the winter, although lower and higher prices respectively are exceptionally received. The average price paid by consumers of milk, when retailed in small amounts, is about 6 cents in summer and 7 cents in winter. The cost may be slightly enhanced by the exercise of close supervision of milch cows and the adoption of precautions necessary to insure milk of high quality and purity from both the chemical and bacteriologic standpoints, but the public has not yet learned to appreciate the advantages of such protection.

The delivery of milk and cream in glass jars is increasing in favor and has distinct advantages. The jar constitutes an accurate measure; it can be readily sterilized and its contents are protected from contamination. Pasteurization of market milk is not generally practiced, only a few cities reporting a small portion as being thus treated, although the practice appears to be gradually extending.

Laws referring to market milk are on the statute books in thirty-five states, while nine other states and territories have enacted pure-food laws having a bearing on the milk supply, but only twenty-six states have officials whose especial duty it is to enforce these laws. Almost every city and many towns and villages have ordinances or board of health regulations concerning the milk supply. With few exceptions, there is some supervision of the milk supply in all cities of the United States having a population over 50,000. Much less supervision is exercised in cities with a population between 50,000 and 25,000, and in small cities and towns supervision is the exception rather than the rule. This consists principally in testing samples of milk to ascertain if they contain the proper amount of cream and solids, while inquiry into the health of the cows furnishing the milk and of the persons handling it, and into the conditions to which it is subsequently exposed, is too often ignored.

Among improvements that have recently been instituted and suggested are the following: The registration of all dairies; official endorsement of properly conducted dairies; inspection of all herds, barns, dairy buildings, etc., once a month; better lighting, ventilation, drainage and cleanliness of cow stables; whitewashing the interior of stables; eradication of tuberculosis from dairy herds; branding of condemned cows; cows not to be given swill feed, etc.; cows to be regularly cleaned; pasturage for city cows; aëration of milk in pure air; prompt cooling of milk and holding it at low temperature until final delivery; shipment of milk promptly from farms after milking; delivery of milk and cream in sealed packages (glass bottles or small cans), so as to avoid unnecessary contamination by city dust, etc.; delivery of milk in cities at any hour of the day when it can be supplied in the best condition; restrictions on the sale of milk in markets, candy stores, etc.; delivery of milk from such stores in bottles only; mixing of herd milk so as to get an article of uniform composition; bottling of milk only at the dairy or place of general supply; daily sterilization of milk utensils; more rigid inspections for preservatives in milk; chemical and bacteriologic examinations of milk; standards for cream and skim milk; the passage of no law that can not be reasonably well enforced; more pay and allowances and greater authority for milk and dairy inspectors; more severe penalties for violation of milk laws; publication of reports on inspection of dairies; education of milk producers by a liberal distribution of circulars, leaflets, etc., bearing on their work.

DISEASE AND MUNICIPAL RESPONSIBILITY.

Human life has become more precious in recent years, and human suffering has taken on the significance of an evil that must, as far as possible, be avoided at any cost. Accidents and death have lost most of their calm acceptance as inevitable results of providential conditions, and strict accountability is demanded. It would be well if the same thing were more true with regard to disease than has been the case up to the present time. Modern medical progress has taught very definitely what are the exact causes of many diseases, and we know now that in most cases when infectious disease affects a particular individual it is not usually (though, of course, it may be) because the person has "caught" the disease, as used to be said, but it is because some one has blundered and thus made it possible for the disease to be communicated in an unsuspected way.

Typhoid fever we now know to be due to the ingestion of the typhoid bacillus. The typhoid bacillus comes from the excretions of a patient suffering from the disease. Unless the assumption that forms the basis of the science of bacteriology is wrong, the disease germ never arises by any chance *de novo*, never originates spontaneously. If typhoid stools and urine were cared for as they should be, and as modern medical practice has made it rather easy for them to be, there should be no further cases of typhoid fever. An enthusiastic sanitarian said not long since, with regard to this question of cause and effect in typhoid fever, that when a person dies of typhoid fever some one should be hung. There is no doubt that a criminal responsibility attaches to the neglect of precautions which would make impossible the communication of typhoid fever to those as yet unaffected by it.

These considerations are of special interest at the present time when we are entering on the season of the year in which typhoid fever is more frequent than at any other and when the death rate from the disease always becomes an important factor in the mortality of most of our large cities. Some of the reasons for this prevalence of typhoid at this season are well understood. The main factors in its distribution are water and such food materials as milk, oysters and certain vegetables that are eaten raw. These articles of food and drink are not dangerous unless there has been some serious neglect with regard to the precautions necessary to protect them from infection by typhoid bacilli. Of all of them by far the most important is the water supply, and this is usually under the care of the municipal authorities, or if supplied by private parties it is under a franchise from the municipal government.

It is only logical to conclude that under these circumstances legal criminal responsibility should hold against the municipal authorities or against those to whom they have granted a franchise if it can be shown that there has been neglect of proper precautions in the matter. A half century ago large corporations were able to shirk their responsibilities for accidents, much more readily than at the present time, but, fortunately, a proper sense of their obligations in such matters has grown up in our communities, and it is well understood that damage suits will follow bodily injury.

It seems not improbable that a corresponding state of affairs will have to come to pass with regard to responsibility for disease. There is no doubt that large corporations are much more careful in guarding against accidents and injuries, since it has become a matter of costly experience that their responsibility for them will always be held strictly to account. Perhaps municipalities will come to something of the same realization under the stress of similar conditions.

Certainly at the present moment nothing is more discouraging in social affairs than the fact that citizens somehow do not consider municipal responsibility as accountable for the suffering, often permanent injury and frequently death that is inflicted by municipal neglect in these important matters.

There is room for improvement in the civic sense of our American communities. Citizens must come to the realization of what is owed to them by city governments in the matter of protection for health, and now as the precautions necessary to secure proper sanitation in every way are so well understood, failure should be followed by immediate legal reclamation. It would seem that physicians owe it to their fellow citizens to make them understand that responsibility for disease is quite as direct as that for accidents. We can foresee that the awakening of such a feeling will be followed by further progress in the healthfulness of city life.

INFANT MORTALITY AND THE LAW OF NATURAL SELECTION.

Those persons who are wont to strengthen a comfortable optimism by extracting sunshine from cucumbers have often urged the view that the high infant mortality that is so characteristic of city life in our time is, from the racial standpoint, not altogether deplorable. The specious argument runs that through the stress of environmental conditions the weaker individuals in each generation are eliminated during the period of infancy, and that, therefore, the adult population in those districts where infant mortality is high must be more vigorous than if the weaklings were able to develop to maturity. It has been asserted that in places having a high infant mortality, the mortality in the succeeding years of childhood is actually lower, the average fitness of the male population for military service greater and tuberculosis less prevalent. Statistical evidence has been adduced in support of this view, especially by Oesterlen, who has maintained with a show of figures that those districts in Europe having a large death rate among infants exhibit a lower mortality during the succeeding years of childhood than do those countries in which the infant mortality is small. The implication is that a high death rate during the first months of infancy must in the long run benefit the race by weeding out the weaker and less fitted to survive. In some quarters fear has been expressed lest too great devotion to the task of preserving feeble infants may lead to a deterioration in the physique of future generations.

From one point of view the preservation of weakly infants needs no defense. The world has been too often the debtor to men of feeble constitution to be willing to admit that only those of strong physique are of value in advancing the knowledge and well-being of the human race. The present generation, with its eyes fixed on the importance of definite material accomplishment, may perhaps need the reminder of Mr. Bliss Perry in his recent brilliant essay on indifferentism that "None of our contemporary hallucinations leads more certainly to ultimate weariness and indifferentism than this too exclusive glorification of 'men who do things.' . . . If we have purchased speed and power at the cost of nobler qualities, if the men who do things are bred at the expense of the men who think and feel, surely the present American model needs modification." But although the idealist and what he stands for may not be conspicuous in the columns of the American daily newspaper, there are many reasons for believing that the kind of success due to great energy and dominant physical power is not the only thing that at present looms large in the minds of many Americans. Huxley has expressed himself on this matter of selecting good citizens with a characteristic touch of scorn for the "saviors of society": "I doubt whether even the keenest judge of character, if he had before him a hundred boys and girls under fourteen, could pick out with the least chance of success those who should be kept, as certain to be serviceable members of the polity, and those who should be chloroformed, as equally sure to be stupid, idle or vicious. The 'points' of a good or of a bad citizen are really far harder to discern than those of a puppy or a shorthorn calf." The assumption that physical vigor in infancy constitutes any criterion of the future significance of the individual to the race may be dismissed as a crudity of a one-sided conception of human life.

From the standpoint of bodily energy or simple physical vigor, the natural selection argument may still retain an element of plausibility. Prinzing, however, in a recent searching criticism[1] of the doctrine advanced by Oesterlen and others, reinforced by extensive statistical material, is utterly unable to find any reason for believing in the existence of correlation between high infant mortality and either a diminished mortality in the early years of childhood, superior physical qualifications for military service, or a low death rate from tuberculosis. In none of these respects do communities that are favored with a high infant mortality possess any advantage over those in which the infant mortality is low.

It is not surprising that this should be the outcome of Prinzing's statistical inquiry when we reflect that by far the larger number of deaths among infants in the first months of life are due not so much to congenital weakness as to errors or misfortunes of nutrition. The quality of the food to which a young infant has access is the great leveler, and does far more than robustness at birth to determine whether the young Darwin or Pasteur or Roosevelt shall perish or survive. Little alarm need be felt, therefore, at the efforts now making to lower the excessive infant mortality in the chief centers of population. It is safe to assume that these endeavors are *not* running counter to the law of natural selection, and will not necessarily result in a survival of either the physically or the intellectually unfit.

ASEXUALIZATION OF CRIMINALS.

A Baltimore grand jury has recommended the asexualization of those convicted of criminal assaults on women, and especially on young girls, thus giving a sort of judicial or official recognition to the proposition that has been repeatedly made by private individuals. That it will be acted on at the present time is rather more than doubtful, but it shows a tendency that may grow even to the point of actual legislation at some future time. Such a punishment might be construed as unconstitutional, but it would at any rate be better than lynching, which is getting so common in some sections that its peculiar methods can almost escape the constitutional provision against "unusual" punishments. Whether the proposed method would be considered unconstitutional we are not prepared to say, but it would be comparatively humane and for a certain class of criminals more effective than the usual methods.

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[1] Centralbl. f. allgem. Gesundheitspfl., 1903, xxii, p. 211.

THE LUST OF SLANDER.

Referring to our editorial last week under the above caption, we are glad to report that Dr. Leffingwell has made a "reply" in the last issue of *American Medicine*. The reply is evasive. Dr. Leffingwell does not deny or disprove that his remarks have created an impression warranting the reference to them in the British antivivisection journal. We must judge utterances by the impression that they are evidently intended to convey rather than by their literal verbal text which may favor quibbles and an evasive answer. It seems clear to us from Dr. Leffingwell's own showing that he had brought out the charge that vivisection was carried on for infamous purposes, and no man recognizing its value and not wishing to convey false impressions would have allowed himself to speak so as to permit of such inferences. We do not think he has cleared up the case as far as his own responsibility is concerned, though he has said enough to spoil his testimony for the antivivisectionists.

Medical News.

CALIFORNIA.

Fullerton Hospital Completed.—The new hospital at Fullerton has been turned over to the board of directors by the contractors. On August 13 the building was formally opened. It has 21 rooms in all and is thoroughly equipped.

Vital Statistics.—In San Francisco during July 500 births were registered, a rate of 14.62 per 1,000 per annum; during the same period 609 deaths were recorded, equivalent to an annual death-rate of 17.82 per 1,000. Violence caused 50 deaths.

Two More Cases of Plague.—The ninety-eighth case of bubonic plague in San Francisco was that of Lee Jim, a Chinaman, who was found dead July 20. The diagnosis was confirmed by autopsy and by bacteriologic tests.——On August 9 W. Bock, a German, of Pacheco, Contra Costa County, died at a San Francisco hospital, and the autopsy established the diagnosis of plague. This is the ninety-ninth case.

Aids State Medical School.—Regarding the relation of the State University to its affiliated medical department, which was discussed at the recent meeting of the board of regents of the university, the superintendent of public instruction states:

> After considerable discussion it was agreed to supply temporary relief to the school, by authorizing its financial committee to sell certain property that was willed to the institution by Dr. Toland, and to apply the money received to the financial aid of the school. The exact status of this department will be an important question for future decision, the regents being about equally divided in opinion as to whether to assume full control of the school or to cut away from it entirely and allow it to shift for itself.

New Laboratory at State University.—The dedication of the Loeb Physiological Laboratory of the University of California took place on August 20. The dedicatory address was delivered by Prof. Wilhelm Ostwald of Leipsic, it being delivered in German, but a full translation was published in the San Francisco papers, as was also the address of Dr. Loeb. The Loeb Laboratory is the gift of Rudolph Spreckels, who furnished $25,000 for the purpose, beside a large part of the equipment. Dr. Herzstein also assisted in equipping the laboratory. Mrs. W. H. Crocker gave a library. An anonymous friend of the university furnished the means of paying Dr. Loeb's salary.

Personal.—Dr. Benjamin A. Plant, physician at the State Penitentiary, Folsom, has resigned.——Dr. James P. Dunn, Oakland, has been appointed chief surgeon of the Southern Pacific Railway in Alameda County.——Dr. Charles E. Turner, Vallejo, has been elected secretary of the local board of health, vice Dr. Walter D. Anderson, deceased.——Dr. Bertram F. Alden has been elected chief surgeon of the French Hospital, San Francisco, succeeding Dr. F. P. Canac-Marquis, resigned.——Dr. J. Denis Arnold, San Francisco, was recently thrown from his horse at Council, Alaska, spraining and wrenching his ankle seriously.——Drs. Edward Henderson, Isaac N. Hughey and Thomas J. Wilson have been appointed members of the Pomona Board of Health.

COLORADO.

July Deaths.—During July 774 deaths occurred in the state, equivalent to an annual death-rate of 15.67 per 1,000. Of these, 12 each were caused by diphtheria and typhoid fever, 3 by smallpox and 2 by scarlet fever.

College Opens.—Denver and Gross Medical College, Denver, opened for its second year September 14, with addresses by Chancellor Henry A. Buchtel, Dr. Edmund C. Rivers, president, and Dr. Leonard Freeman, vice-dean, of the institution.

Personal.—Dr. Arnold Stedman, Denver, was operated on for appendicitis, September 3, and is reported as doing well.——Dr. Elsie Reed Mitchell, Denver, leaves for India, October 1. She will take charge of the Lutheran Hospital at Guntur.

Communicable Diseases.—During July 126 cases of diphtheria, 64 of scarlet fever, 133 of smallpox, and 55 of typhoid fever were reported to the State Board of Health. Compared with the previous month, this shows a decrease of 40 cases of diphtheria, 41 of scarlet fever, and 54 of smallpox, and an increase of 30 cases of typhoid fever.

CONNECTICUT.

New Britain Hospital.—The new hospital building, erected at a cost of more than $20,000, is expected to be ready to receive patients some time this month.

Hospitals Incorporated.—The New Haven Emergency Hospital and the Eastern Emergency Hospital of New Haven, with capital stocks of $5,000 and $2,500 respectively, have been incorporated.

Medico-Military Changes.—Major Rockwell, surgeon First Infantry, C. N. G., has been placed on the retired list; Assistant Surgeon John B. McCook, Hartford, has been appointed surgeon-major, and Dr. Herman A. Tyler, Jr., Hartford, surgeon-lieutenant, both being assigned to the same regiment.

Wickerwork Coffins.—Dr. Charles A. Lindsley, New Haven, secretary of the State Board of Health, advocates burying the dead in wickerwork caskets instead of the usual wooden or metal coffins. The body of the deceased, he said, might sooner come in contact with the earth and be more quickly destroyed. This would be a more sanitary method than the present one.

GEORGIA.

Unqualified Practitioner Sued.—Frances McCandless of Atlanta, a graduate of the American Health College of Cincinnati, an institution incorporated with the object of "teaching and practicing the Religious Spiritual Vitapathic System of Health and Life for Body and Soul," has, nevertheless, been sued by an ungrateful patient for $20,000 damages, for alleged malpractice.

The Grady Hospital Matter.—The committee on hospitals and charters appointed to investigate the rules of the Grady Hospital, Atlanta, in its report endorses the present management of the hospital; and recommends that the entire board of trustees act in the management instead of an executive committee; that the pay department of the hospital be abolished after Jan. 1, 1904; that the number of trustees be reduced to 7; that the out-patient department be abolished; that visiting hours be allowed on Sunday, and that information regarding the affairs of the hospital be freely furnished to the public.

The State Board of Health.—At its first meeting, September 10, in Atlanta, the board was organized, a constitution and by-laws adopted, and Dr. Augustus P. Taylor, Thomasville, elected president *pro tem.*, and Dr. Robert M. Harbin, Rome, secretary *pro tem.* After the organization the following officers were elected: Dr. Willis F. Westmoreland, Atlanta, president; Dr. H. F. Harris, Atlanta, secretary for six years; Drs. Charles Hickes, Dublin, Samuel C. Benedict, Athens, James B. Morgan, Augusta, and Howard J. Williams, Macon, committee on general powers and duties; Drs. H. F. Harris, Atlanta, William W. Stewart, Columbus, and Robert M. Harbin, Rome, committee on diseases common to man and animals, and Drs. Augustus P. Taylor, Thomasville, Giles Hathcock, Belton, and Millard S. Brown, Fort Valley, committee on sanitation and vital statistics.——Dr. F. M. Ridley, La Grange, having declined appointment on account of ill health, the governor has appointed Dr. William W. Stewart, Columbus, a member of the board.

ILLINOIS.

Offender Provisionally Released.—On her promise to refrain from practicing medicine, Mrs. Edith Nail, Pekin, who was arrested a short time ago on the charge of illegal practice, was released September 10.

Physician's Register.—The 1903 "Report on Medical Education" of the Illinois State Board of Health will be issued in about two weeks. This report includes an official register of physicians, corrected to Sept. 14, 1903. Illinois physicians desiring a copy of the report should write to the secretary of the State Board of Health, Springfield.

Skeletons Found in Sanatorium.—In a building formerly occupied by Dr. Carl L. E. Weber, Quincy, as a private hospital for women, in which three skeletons were found a year ago, two more skeletons were found. September 4. While it is supposed that these skeletons are of patients who died in the hospital, Dr. Weber will not be prosecuted as, it is alleged, he is at present under restraint, a mental and physical wreck.

Does Running Water Purify Itself?—Sanitary experts, physicians and bacteriologists representing the Chicago Drainage Board left Chicago, September 16, for a trip down the drainage canal and the Illinois River to St. Louis for the purpose of examining the water along the route and ascertaining whether germs are carried from Chicago to St. Louis. The Sanitary Trustees declare that the river purifies itself long before reaching St. Louis.

Examination for Medical Officers.—In conformity with the new military code adopted by the last general assembly requiring that all medical officers of the National Guard shall be examined as to their competency, the following are ordered to report to General Nicholas Senn in Chicago, September 26, for examination: Charles J. Sowle, first lieutenant and dental surgeon, assigned to Third Infantry; Walter J. Brown, Danville, first lieutenant and assistant surgeon, assigned to artillery battalion; Horace H. Sheets, first lieutenant and assistant surgeon, assigned to Third Infantry; Arthur F. Wilhemy, Decatur, first lieutenant and assistant surgeon, Fifth Infantry; William H. Maley, Galesburg, first lieutenant and assistant surgeon, artillery battalion, and Levi S. Brown, first lieutenant and veterinary surgeon, assigned to artillery battalion.

Chicago.

Hospital Buys Land.—George B. Swift has sold to the Frances E. Willard Temperance Hospital property 24 by 115 feet on Lincoln street, for $1,000.

Personal.—Dr. Frank E. La Force has returned after a month on the Pacific Coast.——Dr. and Mrs. G. E. Fosberg have returned from abroad.——Dr. Denslow Lewis has returned from a year's residence in Berlin.

No Ground for Alarm.—The health department says diphtheria is not so prevalent as usual in the city at this season of the year. There were only 10 deaths from the disease reported during the week, as compared with 14 during the week before. There will undoubtedly be an increase as cold weather approaches from the effects of huddling together in badly-ventilated rooms, both at home and in school.

Deaths of the Week.—Deaths from all causes for the week ended September 12 numbered 504, or 40 more than for the previous week, and 10 more than for the corresponding week of 1902. Acute intestinal diseases head the list of death-causes with 92; then come in order, consumption, 57; violence, 41; heart diseases, 39; Bright's disease, 34; nervous diseases and pneumonia, each 22, and typhoid fever, 21. The deaths represent an annual death rate of 13.94 per 1,000.

Meddlesome, Mischievous and Sensational.—In these terms the department of health characterizes the recent attempt to the superintendent of compulsory education to operate a special health department:

> Physicians of Chicago, school principals and teachers and parents of school children are officially notified that they are not required, either by state law or city ordinance, to report cases of contagious disease, suspected or actual, to any authority except the Contagious Diseases Division of the City Health Department.
>
> This public notice is made necessary by a renewal of the efforts of the superintendent of compulsory education of the school board to operate an independent health department of his own. His motive is no doubt a laudable one, and if his efforts were guided by a moderate degree of professional intelligence and qualification for the work they might be beneficial instead of detrimental. As it is they are meddlesome, mischievous and sensational.

INDIANA.

Typhoid Raging at Norwood.—It is reported that typhoid fever is raging at Norwood, a suburb of Indianapolis, where 21 cases of the disease existed on September 10, with very bad sanitary conditions.

To Restrain Eddyism.—The State Board of Medical Registration commenced the prosecution of Eddyites, August 21, when affidavits were placed in the hands of the states attorney, charging Anna B. Dorland and Laura Funk, Indianapolis, with practicing medicine without license.

New Hospital for Michigan City.—Contracts for the construction of St. Anthony's Hospital, Michigan City, have been awarded by the Order of Franciscan Sisters. The building is expected to cost about $60,000, and is to be ready for occupancy next spring. The cornerstone is to be laid October 11.

Personal.—Dr. William C. Willeford, Washington, had a narrow escape from death by atropin poisoning recently.——Dr. Theodore C. Sargent has been appointed surgeon at the State Soldiers' Home, Lafayette, vice Dr. John A. Martin, resigned.——Dr. Barnhardt Erdman, Indianapolis, has sailed for Europe.

Smallpox.—There were 112 cases of smallpox reported in August from 29 counties, with 12 deaths. In the corresponding month last year there were reported 245 cases in 30 counties, with 2 deaths. The decrease in cases, it will be noted, was 130. The area was decreased by one point and the number of deaths increased 500 per cent. These figures indicate an increased virulence.

August Deaths.—The total number of deaths reported was 2,933, an annual rate of 13.7 per 1,000. In the corresponding month last year there were 3,158 deaths, a rate of 14.8 per 1,000. Deaths under 1 year were 598, or 21.3 per cent. of the total. Deaths 65 years and over, 630, or 22.8 of the total. The consumption deaths numbered 259, typhoid fever 108, diphtheria 21, scarlet fever 8, measles 3, whooping cough 10, pneumonia 79, diarrheal diseases 451, cerebrospinal meningitis 37, influenza 10, puerperal fever 10, cancer 124, violence 165, and smallpox 12. The country death rate was 11.8, the city death rate 17.4 per 1,000. The country rate was less in all but three diseases, namely, scarlet fever, measles and influenza.

Morbidity for August.—The public health was not quite as good as in the preceding month, but was better than in the corresponding month of last year. Typhoid fever increased greatly over the preceding month, the deaths being respectively 108 and 63. There were fewer typhoid deaths, however, than in August, 1902. The order of prevalence of disease was as follows: Typhoid fever, diarrhea, cholera infantum, cholera morbus, rheumatism, dysentery, intermittent fever, tonsillitis, bronchitis, inflammation of bowels, scarlet fever, diphtheria, influenza, pneumonia, erysipelas, measles, whooping cough, pleuritis, cerebrospinal meningitis and puerperal fever.

Resolutions Regarding Contract Work.—At the meeting of the Henry County Medical Society held at Spiceland, June 25, the following resolutions were adopted:

> Whereas, One of the principal objects of our organization is to enable its members to receive just and full compensation for their services;
>
> Whereas, The rapid building of traction lines, whose construction and operation are fruitful causes of accidents and injuries, is of vital importance and interest to the physician and surgeon;
>
> Whereas, Traction companies are offering to make contracts with physicians and surgeons, wherein the sole compensation for the services of the latter consists of passes over the lines of said companies; (See copy of contract appended.)
>
> Whereas, This appeal to the vanity, jealousy and envy of the surgeon tends to debase the dignity of the profession and therefore calls for imperative action on the part of this society; therefore, be it
>
> *Resolved,* That it is the sense of this society that entering into contracts with traction or other companies, to serve them without just and full compensation is undignified, unprofessional and in-

jurious to the profession, and that we should not enter into such contracts and to do all in our power to discourage others from entering into them;

Resolved, That a copy of these resolutions be sent to each physician in Henry County, requesting his co-operation in carrying out the same.

SAMPLE CONTRACT.

.... Traction Company of Indiana.

I, ..., M.D., of ...., Indiana, hereby propose and agree to serve the .... Traction Company of Indiana as surgeon at ...., Indiana and vicinity, for the consideration of an annual pass for myself, over the Interurban Lines of this Company, and in the event of the acceptance of this proposition I hereby agree:

1st. To attend professionally to the best of my ability all cases of personal injuries received by employés of said Company, or by any other highway travelers or others, arising di the management, operation or busines r where such injuries occur upon the id to furnish the necessary dressings ding these cases; and to promptly report each case on the proper blank furnished for this purpose.

2nd. To go to any point upon the Company's lines and give the necessary attention to the injured persons, when requested in cases of emergency, also to attend any case of injury as above named when brought into my vicinity.

3rd. To examine persons who claim to have been injured in a manner aforesaid when requested, and make a prompt report to the Company, and attend court to give testimony in regard to such cases without extra compensation, also to vaccinate employés and make physical examinations of them when requested.

4th. To provide, at my charge and expense, the necessary attention above specified, by a competent surgeon in my absence or disability.

KANSAS.

Illicit Sale of Cocain.—P. P. Aherne, a druggist of Wichita, has been arrested on the charge of selling cocain and morphin without the prescription of a physician.

New Asylum to Open.—The new state hospital at Parsons, intended for the use of epileptics only, will be opened some time this month. The buildings thus far erected will accommodate 165 patients, but the intention is eventually to enlarge the buildings to a capacity of 1,000.

Too Much Calomel.—Dr. Olin P. Wood, Hall's Summit, has been sued by J. P. Stukey, who alleges that the defendant gave him mercury and calomel in excessive amounts and with undue frequency, whereby he was salivated, etc. He asks $1,000 damages.

Asylum Abuses.—The committee appointed by the governor to investigate alleged abuses in the state hospitals for the insane, embodies in its report the following:

> The committee finds that there exists in the wards, among the attendants, careless practices in the handling of patients that frequently amount to unwarranted force and punishment, and sometimes to cruelty.
>
> There exists among the attendants a kind of secret understanding which has the influence of restraining one attendant from informing the superintendent or other superior of cases of misconduct and abuses on the part of other attendants toward the patients.

KENTUCKY.

Smallpox.—Dr. Uriah L. Taylor, Columbia, reports 19 cases of smallpox in the eastern part of Adair County.——At Washington, Daviess County, 16 cases are reported.

Quarter System in Louisville Medical College.—The medical department of Kentucky University has decided to introduce the quarter system and continue in session the whole year.

Personal.—Dr. P. Richard Taylor, Louisville, dean of the Hospital College of Medicine, has just recovered from a serious attack of ptomain poisoning.——Dr. Hugh R. Manning, chief clerk to the pension agent in Louisville, has been asked to resign because of alleged infringement of civil service rules.

What Killed Caine.—Considerable interest has been aroused by the autopsy ordered by the insurance companies on the body of the late Paul Caine, who was drowned in the Ohio River several weeks ago. Drs. Samuel E. Woody, Philip F. Barbour, George W. Griffiths and H. L. Hunt are in charge of the investigation for the insurance companies; Drs. Henry M. Goodman, Henry A. Cottell and A. Harris Kelly for the Caine family. Strychnin was suspected to have been taken by the deceased prior to his going into the water for a swim, and it is on these suspicions that the examination has been ordered.

Vital Statistics of Louisville.—Health Officer Allen has just submitted his annual report for the fiscal year ended August 31. Among the diseases credited with the most deaths are the following: Tuberculosis, 449; heart disease, 329; pneumonia, 293; inanition, 184; diphtheria, 121; typhoid fever, 157; Bright's disease, 181; enterocolitis, 145, and meningitis, 101. Considerable space is devoted to the question of diphtheria, the death rate from which was 6.8 per cent. The disease was of a much more virulent type than in previous years. Prior to 1898 there were no records of contagious and infectious diseases. In 1898-9, with 189 cases, the mortality rate was 1.37; 1899-1900, 160 cases, with a death rate of 1.62; 1900-1, 317 cases, with a death rate of 16.22; 1901-2, 844 cases, with a death rate of 1.30; 1902-3, 834 cases, with a death rate of 6.08 per cent. Dr. Allen commends the city for its action in distributing free antitoxin to those children whose parents are unable to purchase it.

LOUISIANA.

Personal.—Dr. Felix Formento, surgeon of the Soldiers' Home, New Orleans, has resigned.

Milk Inspection.—The authority of the New Orleans Board of Health to inspect milk brought into the city by out-of-town dairies was established at a conference held between the state and city boards last week.

Proposed Pasteur Institute.—At the meeting of the board of administrators of the Charity Hospital, New Orleans, held September 7, the question of establishing a Pasteur addition to the hospital was discussed, but no definite action was taken.

Sanitary Report for August.—The sanitary officer of the New Orleans Board of Health reports: Diphtheria, 11 cases, with 2 deaths; scarlatina, 4 cases; variola, 1 case (colored), imported; typhoid fever, 79 cases in 66 premises, with 21 deaths, 13 white, 8 colored.

Sanitary Barber Shops.—At the last meeting of the New Orleans Board of Health a report was submitted recommending the sterilization of all implements used in New Orleans barber shops. The regulations are drawn up on the same lines as those adopted by New York and other cities.

August Mortality.—The August mortality showed an improvement on the record for the same month last year. White mortality 313, colored 173, total 486; giving a death rate for white of 16.54 per 1,000 per annum and for colored 25.01, or a total death rate of 18.81. The rate for August, 1902, was 19.98, 17.72 for white, and 27.82 for colored.

Lunacy Increasing.—It is said by Dr. George A. B. Hays that in Louisiana insanity is increasing at the rate of more than 10 per cent. a year, or five times as fast as the population. When he took charge of the Louisiana Insane Asylum at Jackson in 1896 there were 850 insane persons; there are now 1,550, an increase of 80 per cent. in seven years, while the population has grown only 15 per cent.

MARYLAND.

Baltimore Personals.—Dr. John G. Jay is at Wiesbaden, Germany.——Dr. Alexander D. McConachie has returned from abroad.——Dr. George W. Norris has gone to the White Mountains.

Families of Deceased Physicians.—The following have been appointed trustees of "The Fund for the Relief of Widows and Orphans of Deceased Members," founded by the Medical and Chirurgical Faculty at its meeting in April: Dr. Eugene F. Cordell, chairman, Drs. William Osler, Daniel W. Cathell, John W. Chambers and Robert W. Johnson. An effort will be made at once to start the project with $1,000.

Springs' Virtues Long Known.—In 1698 the provincial assembly empowered a body of trustees to purchase land for the erection of a hospital for the sick poor, at the "Coole Springs in St. Mary's County." This action was induced by the prevalence of an epidemic in the state. To this first Maryland hospital Gov. Francis Nicholson subscribed $125. The act authorized the purchase of 50 acres, including the said "healing fountains." Miraculous cures were reported from the use of these waters, which are still used for the supply of Charlotte Hall School, also a provincial foundation. It is of interest that the recognition of the powers of these springs formed part of the first Thanksgiving proclamation in Maryland.

Medical Points in Grand Jury Report.—The report of the grand jury contains some points of medical interest. The sanitary condition of the city is pronounced very unsatisfactory. Diphtheria, scarlet fever and typhoid fever during May, June and July were doubly as prevalent as last year. The improvements recommended are a modern sewerage system, improved pavements, abolition of slaughter houses in the city limits, a hospital for infectious diseases, improvement of the city's water supply, and the discontinuance of the practice of collecting refuse from hotels and lunch rooms by day. A lavatory at the entrance of the park is recommended. About three-fourths of the cases that come before the grand jury are of negroes, who in nearly all cases live together as man and wife, without regard to the marriage law. It would be wise to compel these people to marry; if not, to punish them for adultery, thereby reducing the cause for a great deal of crime. Castration is suggested for the crime of assault on women, and especially on little girls, and the enactment of a law to that effect by the next legislature of Maryland, which meets this winter, is heartily recommended. Hanging no longer deters this class of depraved criminals. Such a bill was introduced in the last Pennsylvania legislature. The growing cocain habit is considered responsible for a great deal of crime.

MISSISSIPPI.

Publication of Results of Examinations.—The Mississippi State Board of Health, at its last meeting, May, 1903, adopted the following:

> WHEREAS, The experience of this board shows a rapidly increasing number of applicants for license to practice medicine, who are decidedly deficient in the elementary branches of an English education and who are unable to comprehend the meaning of many plainly-written questions; whose early education is so meager that it is impossible for them to grasp the principles of medicine. Since this is an injustice to the public, and dangerous to the lives and health of the people of the State of Mississippi, be it
>
> *Resolved*, That, in future, the names of the applicants who fail before this board, as well as the names of those who pass, shall be given out for publication, with the names of the medical colleges of which they are graduates. And, further, be it
>
> *Resolved*, That the secretary of this board shall transmit to the various medical colleges whose graduates appear before this board a list of students from their colleges who fail, with the request that greater requirements in the elementary branches of an English education be made of students who matriculate at their schools.

NEW YORK.

On Road to Recovery.—Dr. George Blumer, formerly director of the Bender Laboratory, Albany, who was operated on for appendicitis September 1, is making a good recovery.

Pure Water for Lockport.—The fire and water committee of the common council was granted permission by the council to issue bonds for $2,000 and to use it for the employment of water experts and to sink test wells.

Barber Examiners.—The State Board of Barber Examiners has announced that it will begin prosecution immediately of the barbers of the state who have failed to secure licenses. A fine of $10 or 30 days in jail is provided.

Dinner for Dr. White.—Dr. William A. White, Binghamton, who has recently been made superintendent of the Government Hospital for the Insane, Washington, was given a farewell dinner by a large number of Binghamton friends, August 31. The employes of the hospital have presented Dr. White with a handsome Turkish rug.

New York City.

A Fasting Man.—A press builder of Brooklyn has undertaken a forty-day fast to demonstrate that it is possible for a man to live and work well on a diet of water. He began the present fast on August 22, at which time he weighed 173 pounds. On a former occasion, it is said, he went without eating for nearly three weeks.

Suspension, Protest, Reinstatement.—The suspension of one of the house physicians of Bellevue Hospital, Dr. W. B. Jones, has resulted in the drawing up of a formal protest by the house staff for presentation to the board of medical inspectors. The document complains of the uncivil manner in which the members of the house staff are treated by the superintendent of nurses, and asks that the authority of the superintendent be defined. Dr. Jones has been reinstated on condition that the authority of the superintendent is always to be recognized.

Research in Pathology and Bacteriology.—Cornell University Medical College has provided for a chair of experimental pathology and bacteriology to carry on research work, independently of the regular instruction given to undergraduates. Dr. Bertram H. Buxton is to be in charge, and will be assisted by Dr. Victor C. Vaughan, Jr. The pathologic organic chemistry, so intimately associated with all the problems of disordered metabolism, will be under the direction of Mr. Beebe. This work is to be entirely distinct from all undergraduate or postgraduate instruction and purely for the advancement of scientific knowledge, and is to be conducted in the Loomis Laboratory, a building originally designed especially for this purpose.

Health Department Projects.—It is the purpose of the health department to erect a one-story building next to the department's building, wherein medical aid will be rendered by the health department physicians to poor consumptives. A new hospital for the treatment of trachoma cases from the public schools is to be established in October, and hospitals for the same purpose are to be opened in the boroughs of Brooklyn and the Bronx. It is also planned to inaugurate an extensive system of sewerage and drainage near Coney Island and Sheepshead Bay and on Staten Island in the hope that mosquitoes and malaria may thus be exterminated. This last project will, of course, be expensive, but is to be paid for by assessments on the property benefited.

PENNSYLVANIA.

Philadelphia.

Increase in Typhoid.—Typhoid fever showed an increase for the week ended September 12, there being 135 new cases reported, as against 104 for the week before. The feeling prevails that smallpox is under control, there being only 7 new cases for the week.

Health Department and School Board Co-operate.—The department of health and the board of education are to co-operate in the inspection of the pupils of the public schools to determine in each case whether the child is properly protected by vaccination. When such protection does not exist parents are to be urged to have vaccination done either by the family physician or at the city's expense by a vaccine physician. Pennsylvania is much in need of a compulsory vaccination law.

Phipps Institute Chartered.—A charter has been granted to the Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis. The managers are now in a position to make plans for the permanent institution, involving an expenditure of $1,000,000, the gift of Henry Phipps. It has not been decided where the institute will be permanently located. The idea of the president seems to be that a thickly-populated section should be chosen, such as that now occupied by the temporary institute. The directors for the first year are Henry Phipps, Dr. Lawrence Flick of Philadelphia, president, and George E. Gordon of New York. An attempt will be made to have the International Congress of Tuberculosis meet at the institute in 1905.

SOUTH DAKOTA.

Adopt Resolutions.—The State Medical Society, at its recent meeting, adopted the resolutions concerning the examination of the eyes and ears of school children, which were recommended by the American Medical Association.

Personal.—Dr. James A. Somerville, for two years physician for the State Soldiers' Home, has resigned, and Dr. William S. Bentley, Gary, has been appointed to succeed him.——Dr. Romeo R. Stevenson, Sioux Falls, has returned from a six months' trip to Europe.

Law Constitutional But Not Retroactive.—Dr. Gilbert Loeffler, Yankton, who was arrested a short time ago by the authorities of Minnehaha County on the charge of having come to the county to practice without having paid the $500 itinerant physician's license required by the medical examiner law of the last legislature, has been discharged. Judge Jones held that the law does not apply to physicians who were practicing in the state when the law went into effect July 1, 1903. The decision in no way affects the constitutionality of the law.

GENERAL.

Yellow Fever in Mexico.—No particular change is reported in the yellow fever situation in Mexico. Considerable financial loss is reported from Texas cities, due to the interruption of commerce.

Queen's Hospital, Hawaii, Report.—The biennial meeting of the Queen's Hospital Corporation, Honolulu, was held August 20. The number of patients admitted in 24 months was 1,398, of whom 522 were Hawaiians, 232 Americans, 165 Portuguese, etc. There were 95 major and 128 minor operations; and 92 deaths, which was a percentage of 6.28 per cent. Under agreement with the U. S. Public Health and Marine-Hospital Service 237 American seamen, of whom 41 were Hawaiian born, were admitted, and were treated by marine-hospital surgeons.

An Impostor.—Dr. J. H. Musser, Philadelphia, wishes to warn the profession concerning a young man who pretends to be his nephew, and on various pretexts secures money—mostly from Dr. Musser's personal friends. Dr. Musser has no nephew by the name of Musser, and knows of no one who dares use his name in any scheme whatever. Mr. P. Corzelius, representing the American Medical Association, has a letter from Dr. Musser, as well as other means of identity for the purpose of carrying on his work. Dr. Musser wishes other journals to circulate this warning.

Eddyism in Hawaii.—Hawaiian sorcerers and witch-doctors have taken up Eddyism and find it right along their line. Attention has been called to this by the recent death of a sick man from being beaten on the head with a heavy bible. A native by the name of Makaio has been sentenced to a term of two years for manslaughter, for prescribing the above treatment. He alleged that he directed simply the placing of the bible on the man. The widow alleged that he directed the more vigorous application, which she gave. His description of his satisfaction with Eddyism as a treatment is interesting.

The Cuban Plague Scare: Is It Yellow Fever?—The alleged disease at Daiquiri, near Santiago, Cuba, continues to cause much remark in the lay press. The latest development is the assertion of Dr. A. M. Fernandez Ybarra, who has recently come from Cuba, that yellow fever exists in Cuba, and is kept secret by the officials to prevent the United States from stepping in and establishing a quarantine, as is agreed by the treaty in case of an epidemic of yellow fever. He alleges that cases of yellow fever are called remittent fever, pernicious malarial fever, malignant jaundice, etc. In reply to this assertion, the United States Public Health and Marine-Hospital Service denies the presence of yellow fever, and declares that the statements of Dr. Ybarra are based on misinformation.

CANADA.

Spitting in Montreal.—The Woman's Christian Association of Montreal is making strenuous efforts to prevent spitting in the streets of that city. A deputation of the members waited on the mayor last week and presented statistics showing the prevalence of the habit.

Ontario Board of Health.—The Ontario government has appointed the following to compose the Ontario Board of Health for the next three years: Dr. Edward E. Kitchen, St. George, chairman; Dr. Alexander Thompson, Strathroy; Dr. R. P. Boucher, Peterboro; Dr. Wm. H. Oldright, Toronto; Dr. John Douglass, Coburg; Dr. J. J. Cassidy, Toronto.

St. Francis District Medical Association of the eastern townships of Quebec held its annual meeting at Sherbrooke, September 10. The election of officers resulted as follows: President, Dr. L. C. Bachaud; vice-presidents, Drs. J. McCabe and A. J. Beique; secretary, Dr. F. A. Gadbois; assistant secretary, Dr. Williams; council, Drs. Farrell, Austin and Carmichael.

Canned Vegetables Analyzed.—The chemists of the Inland Revenue Department at Ottawa have just completed an analysis of 100 samples of canned vegetables. No chemical preservative was detected in any sample. All save two were found in good condition. In two instances copper was found in peas, but only a trace, and there was no evidence that it was put there for the purpose of intensifying color.

Much Typhoid.—The report for August of the Montreal General Hospital shows that 243 patients were admitted into the wards during that month, that 217 were discharged and that 18 died. A great increase in the number of typhoid fever cases was reported, the capacity of the institution being severely taxed. At one time there were 55 cases, as compared with 15 in the corresponding month of 1902. In the out-door department there were 2,904 consultations. In July there were 280 patients and 21 deaths.

Executive Health Officers of Ontario.—The eighteenth annual meeting of the Association of Executive Health Officers of Ontario was held at Peterboro, September 9 and 10, under the presidency of Dr. Thomas MacFarlane of Ottawa, chief analyst for the dominion government. A discussion took place on a paper submitted by Dr. W. T. Connell, professor of pathology in Queen's University, on "A Water-Borne Epidemic of Typhoid Fever," and on a paper read by Dr. McNulty of Peterboro on "The Etiology and Suppression of Typhoid Epidemics." Another paper which excited keen discussion was one by Dr. Shaw of Keene on "The County Medical Health Officer," showing that there was a general feeling favoring a change that would substitute county and district health officers for township officers. A resolution was passed instructing the executive committee of the association to bring to the attention of the provincial government the necessity of some form of military drill being introduced into the public schools of the province. The election of officers resulted as follows: President, Dr. J. W. Lane, Mallorytown; vice-president, Dr. C. A. Bowlby, London; secretary, Dr. Hodgetts, Toronto; executive council, Dr. P. H. Bryce, Toronto; W. Chipman, C.E. Toronto; Dr. J. M. Shaw, Keene; Mr. W. S. Richards, Chatham, and Dr. Boucher, Peterboro.

FOREIGN.

Typhus in China.—A severe epidemic of typhus is reported (via Pekin) in the interior of China. Ten thousand persons have died.

Thousands for Roman Sanitarium.—Signor Pietro Cartoni, a rich Italian farmer, has given $190,000 for a tuberculosis sanitarium outside the city of Rome.

Biologic Blood Test Officially Adopted in Vienna.—The institute for serotherapy connected with the Vienna University has been empowered to furnish prepared serum for the biologic blood test for medicolegal testimony.

Statue to Ollier.—The model has been completed for the bronze statue of the late Professor Ollier which is to be erected in some public square in Lyons. There is to be only the life-size figure of the surgeon in his robe, on a simple granite pedestal.

Australia Wants Good Food for the Army.—A law has been passed in Australia, prescribing a penalty of three years' hard labor for supplying or knowingly receiving supplies for the army inferior to specifications. This includes contractors or purveyors and officials of the army supervising such matters.

Von Behring Honored.—The Emperor of Germany has conferred the title of *Wirklicher Geheimer Rath*, or actual privy councilor, on Prof. E. von Behring—a rare distinction. It is the first time that it has been given to a member of the profession who has not gained eminence as a surgeon, as was the case with Esmarch and von Bergmann.

Plague in Marseilles.—Eleven cases of bubonic plague with seven deaths occurred in Marseilles, France, the first of this month. They originated from a steamer with a cargo of rags from Constantinople. Prompt disinfection was enforced and the spread of the plague, it is thought, has been prevented. Cable reports state that there is little doubt of the identity of the plague.

Reduction of Lead-Poisoning in Germany.—The hospital statistics for Prussia show that the number of persons treated for lead-poisoning has fallen from 1,624 in 1899 to 1,383 in 1901. The total number of male patients admitted to the hospitals has increased during this time from 371,378 to 502,113, showing that the reduction in the cases of lead-poisoning is a reality.

Investigation of Substances Producing Radium.—The Vienna Academy of Sciences has appointed a committee, which is already at work, studying the pitchblende, the substance from which radium is derived. It occurs in profusion in the mineral-bearing mountains of Bohemia. Baron Auer von Welsbach, whose name is so familiar to Americans, has placed his extensive works and laboratories at the disposal of the committee.

The Next French Congress of Alienists and Neurologists.—The thirteenth congress was held at Brussels as previously mentioned. An interesting feature of the meeting was the trip to the family colony at Gheel, which has been in operation for centuries and is always cited by advocates of the family colony plan. The next congress will be held at Pau in August, 1904. Brissaud will preside and the following questions have been appointed for discussion; Organic Dementia; Motor Localization in the Cord, and the Criminal Insane.

Remuneration for Contract Practice in Germany.—The official sickness insurance societies of Saxony have recently published their annual report. It shows that the 2,463 societies in the kingdom paid for medical attendance during 1899, 4,867,008 marks, or about $1,234,000, equal to 4.25 marks, or $1.06 per member. This is an increase of 22 cents per member during the last five years. About 21.75 per cent. of the total income of the societies is paid out for medical attendance. These figures are above the average, and are regarded as an instance of benefit derived from organization of the profession.

Attempt at Suicide with Typhoid Cultures.—A young woman who had access to the medical laboratory connected with the Paris Charité hospital took from the incubator two tubes containing virulent cultures of the typhoid bacillus and swallowed the contents. The case is described in the last *Archives Gén. de Méd.* as a laboratory experiment demonstrating with mathematical exactness the data that have been gleaned from experimental research and by observation at the bedside. There were no symptoms for two days, then violent headache and by the sixth day the patient could not leave her bed. The temperature began to rise the seventh day, and after this the typhoid fever ran the customary course. She recovered in due time, and four months later was delivered of a living child.

The Leipsic "Verband."—This is the abbreviated name by which the German Association for the Relief of the Economic Conditions of Members of the Medical Profession is known in Germany. It was founded only a few years ago to supply advice and material aid to physicians struggling to maintain their independence in contract practice or under other disadvantages. The Verband has aided the medical officers of the sickness insurance societies at Gera, Mühlhausen and elsewhere and warned other physicians not to take the places resigned by the officers on account of the intolerable conditions prevailing. The recent legislation on sickness insurance has brought numbers of new recruits into the association until it now has 8,933 members. At present it has seven places on its list where it is assisting the physicians, both materially and morally, in their resistance to the degradation of the profession by the sickness insurance societies. At Constance troubles of this nature have just been satisfactorily settled, thanks to its mediation.

Denunciations of Pasteur Treatment of Hydrophobia in Italy.—The *Journal de Méd. de Paris* never misses an opportunity to cast discredit on Pasteur treatment, and, in fact, Lutaud, the editor, has never accepted the science of bacteriology with the same seriousness as the rest of the medical world. The last issue of that journal contains a letter from Dr. C. Ruata, professor of hygiene at Perugia, commenting on the recent death of 4 persons at Novara who had been bitten by a rabid dog and who had taken a course of treatment at the Pasteur Institute at Milan. Ruata's communication also appears in certain Italian papers. He asserts that since the Pasteur institutes have been introduced into Italy the number of deaths from hydrophobia has constantly increased, whereas they used to average 65 a year, during the last fourteen years, since the institutes were organized, the average has risen to 85. About 3,000 persons are treated each year in the nine institutes in Italy, and the number of deaths has risen by a third. He argues that this state of things should be changed and prophylactic hygienic measures adopted instead of the false security imparted by the Pasteur institutes. The patients whom they report as cured probably never had the disease and would have remained in better health without it. Lutaud comments on the letter that Ruata's words will certainly attract attention where "science is not hypnotized by the glory of the gr-r-r-reat Pasteur."

Correspondence.

Tetanus in the South at the Christmas Celebration.

San Antonio, Tex., Sept. 9, 1903.

To the Editor:—Reading the editorial in The Journal, August 29, giving the astounding number of the last Fourth of July tetanus cases, it occurred to me to call your attention to the fact that the number of tetanus victims of the blank cartridge will be much greater if you include those which result during the Christmas celebration in the south.

On my arrival from the north to this city about four years ago I was pleasantly surprised to find how orderly and quietly the people here celebrate the Fourth of July. Not a single accident case was reported in the press; but my surprise was still greater when Christmas day came: Fire crackers, pistols and cannons were all brought into use in trying to make up for the Fourth of July. The celebration is in part kept up till after the New Year's day, and certainly, the usual accidents followed by tetanus are not wanting. The last Christmas celebration carried off two victims of tetanus, to my knowledge: a colored boy of 8 and a young white girl of 16. I am told that the same sort of Christmas celebration is going on all over the south. How far this is true, I think it will be worth while for you to investigate.

R. Robinson, M.D.

Sawing Off a Plaster Cast.

Oakland, Cal., Sept. 7, 1903.

To the Editor:—In The Journal, September 5, Dr. Bechtol speaks under New Appliances of the Gigli saw in the removal of plaster-of-paris casts, and describes the method. Whenever I think I have discovered something new I always think of the saying, "Go abroad, young man." The method and saw described have been in use several years on this coast. One of the first *x*-ray photographs taken in the Waldeck Hospital about seven years ago shows the saw in the cast, as it was left under the cast until the plaster had set; which is better than removing it while the plaster is wet and soft. If not the Gigli saw, a piece of twisted or nicked steel wire will do. It is well to put on a light gauze bandage over the cotton before covering up the wire with the plaster, because if the cotton catches in the wire it will not work. Put vaselin on the wire or it will get rusty and break easily if you should leave it in over night.

The idea is all right when one is sawing over a concave surface, but when sawing over a convexity the saw is liable to seek the level of the two resisting ends and cut anything that presses along its route. The saw is working in the dark, as it were. After the Doctor has sawed down on a few patellas and malleoli, and cut open the back of the leg a few times, and spoiled a few dollar and a half Gigli saws, he may resort to the old-fashioned ten-cent cobbler's knife which every one knows how to use and has no attachments. By filing it so as to get a rough wire edge and running it over the dressing just before it sets, it will cut easily, and you know what you are cutting. If you have a compound fracture and want a window in your dressing the saws are useless.

M. Lewis Emerson, M.D.

Illegally Reprinting Articles from the Journal.

New York, Aug. 18, 1903.

To the Editor:—My attention has been called to a reprint of my article on "Anesthol" (which appeared in The Journal, Feb. 28 and March 7, 1903), made and circulated by Messrs. Lehn & Fink, a wholesale drug firm of New York. These reprints were made entirely without my knowledge. I promptly wrote to Messrs. Lehn & Fink, asking for an explanation. The answer I received from them was most unsatisfactory, carefully avoiding the point at issue: "lack of my (the author's) consent for making the reprints," and not even offering an apology for their conduct.

I can but protest against the method adopted by this firm, viz., using a scientific article for commercial purposes, without securing the writer's consent prior to their doing so. I need not assure you that had they asked me beforehand I would have refused their proposition most emphatically. Is there no way of protecting a professional man against such abuses?

Willy Meyer.

Note.—Everything printed in The Journal of the American Medical Association is copyrighted, and no one has a right to reprint any of its contents without permission, consequently, Lehn & Fink are liable to prosecution for violating the copyright laws. It is to prevent just such occurrences as this that The Journal goes to the expense of copyrighting all of its contents, and such a violation of law and the rights and privileges of others, we are happy to say, seldom occurs.

The Proper Perineal Prostatectomy Incision.

Glasgow, Aug. 29, 1903.

To the Editor:—The incision in question is undoubtedly the inverted Y, as advocated by Professor Senn in The Journal, August 15, and there can be little doubt that its more general acceptance will be hastened by the support its practice has just secured at the hands of an authority so widely accepted as Professor Senn's.

The inverted Y incision I have practiced and taught for years as the proper incision for perineal prostatectomy. Among the earliest of my references to it may be noted a description of it in a paper on prostatectomy in the *Lancet*, April 14, 1894, and in a discussion in the New York Academy of Medicine (reported in the *Medical News*, 1898) it was subjected to just such unfavorable criticism as Professor Senn now seeks to disarm, and which, though coming from other quarters as well, has never affected my belief in its merits. I rarely make use of any other.

Jas. H. Nicoll,
Professor of Surgery, Andersonian College, Glasgow.

The Lust of Slander.

Roselle, Ill., Sept. 14, 1903.

To the Editor:—In possible explanation of the "Leffingwell accusation," referred to in your editorial, "The Lust of

Slander," in The Journal, September 12, permit me to suggest that Leffingwell has made to serve his purpose a statement which, in itself true and authenticated, does in no wise refer to vivisectors and their work. Krafft-Ebing, in his "Psychopathia Sexualis," page 84 et seq., says, in discussing sadism:

> In numerous cases, sadistically perverse men, that are afraid of criminal acts with human beings, or that care only for the sight of the suffering of a sensitive being, make use of the sight of dying animals, or torture animals, to stimulate or excite their lust. (Then follow some cases.) Thus, in these and similar cases, the vita sexualis is so constituted, *ab origine*, that the sight of blood, death, etc., excites lustful feeling.

I think it very probable that Leffingwell has used the above quotation for his purpose. The fact that it does not at all serve, except through the lie, and that the whole argument is *"an den Haaren herbei gezogen,"* has troubled him but little.

H. J. Achard.

The Physiologic Generation Cycle of Woman.

Mahanoy City, Pa., Sept. 9, 1903.

To the Editor:—In The Journal, September 5, page 627, synopsis of Dr. Jennie G. Drennan's paper on the "Physiologic Generation Cycle of Woman," the following statement is made:

> In mammals and primitive woman ovulation occurs at distinct periods of the year and at no other time. Mating with the primitive woman was much like that of the brute creation now; as soon as she was sexually mature she married and entered on the physiologic cycle of a *mammal, etc.*

It has seemed to me in the course of my studies that ovulation depended more on the abundance of food at the command of woman than any other cause, regardless of the stage at which she lived in the history of civilization. I wish Dr. Drennan would state the grounds on which she bases her statement, for it is a very interesting scientific fact if primitive woman differs so radically from her sister in civilization.

Geo. W. Reese.

Queries and Minor Notes.

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

LIMITS OF CONSANGUINEOUS MARRIAGES.

—————, ——., Sept. 12, 1903.

To the Editor:—Will you kindly inform me through the "Queries and Minor Notes" whether the offspring from the marriage of second cousins are generally considered beyond the defects and deformities resulting from consanguinity? If not, what per cent. are considered so afflicted?

E. G. B.

Ans.—A second cousin has only half the common heredity of a first cousin. According to Galton's calculation, their respective amounts can be represented by 1/8 and 1/16; therefore, the chances of morbid heredity would not be more than one-half, probably less. There has been no legislation against the marriage of second cousins anywhere, so far as we know, and we believe such marriages are generally considered comparatively safe as regards offspring. Still, in special cases, there might be a concentration of the common heredity even beyond this degree of relationship. As to in what percentage of cases this would occur, we know of no way of determining.

CONDUCT AFTER SALE OF PRACTICE AND SUPPOSED PERMANENT REMOVAL.

City of Mexico, Aug. 21, 1903.

To the Editor:—Please publish your opinion of the ethics of the following case: Three years ago A hired B to go to a foreign country, where A was established, and assist him. B was to have a salary the first year and a third interest in the business the second year. At the beginning of the second year B prefers an increased salary to the third interest, and is accommodated, but still claims the right to the third interest at the end of the second year. This is agreed to. During the second year B becomes dissatisfied on account of ill health, and desires to return to the United States. A induces C to purchase the interest of B in the business, which he does, paying therefor $1,000, which B accepts and immediately returns to the United States, having previously introduced C to as many of his patrons as the time permitted. No contract or papers were signed. B returns in a few months and resumes independent practice, claiming that he has a right to do so. Did he act honorably?

X. Y. Z.

Ans.—To the *ex parte* statement made by our inquirer, there can be but one answer, and that is that B did not act honorably, to say the least. Furthermore, there certainly is redress for C if he should go to law. C paid $1,000 for B's practice and good will, which meant that B must give up his practice and good will. By his returning and entering into practice again, he took back the two things that he sold. He should, therefore, give back the $1,000.

RIGORS IN TYPHOID WITH HIGH TEMPERATURE.

Americus, Ga., Aug. 31, 1903.

To the Editor:—In typhoid fever, characterized by high temperature, rigors occur when the temperature is the highest. These rigors are not due to malaria; the patient will have them when thoroughly cinchonized. Can you give me the cause of this?

J. C. Field, M.D.

Ans.—In typhoid, chills occasionally occur where no clear explanation of their cause can be offered. Perhaps the most frequent time of the occurrence of severe chills is during convalescence, when there may be repeated rigors. Why this is so is not plain. Of course, chills at the onset are not so very unusual. And complications, such as pneumonia, parotitis, malaria or secondary infection with pyogenic organisms, may be ushered in by a chill, and where antipyrin, acetanilid or phenacetin have been used with a free hand chills are not infrequent. Perhaps the chills that occur during the course of the disease are at times due to the sudden invasion of the blood by unusually large numbers of typhoid bacilli, or the unusually rapid development of the germs within the blood. Complications that are often unrecognizable, as in the mesenteric glands or gall bladder, may explain them at times. Constipation, with its attendant absorptive toxemia, is held by some to be the cause of some of the chills of typhoid fever. Until more is known of the real physics and chemistry of chill production in general, some of the chills of typhoid must go unexplained. Certainly, in the cases mentioned by our correspondent, malaria is ruled out as a cause, for not only does malaria, when it complicates typhoid, usually manifest itself during convalescence, but it will not resist quinin if freely given.

A full discussion of the subject of chills in typhoid fever will be found in Osler's "Studies on Typhoid Fever," Series II, in the Johns Hopkins Hospital Reports, Vol. IV, and in Vol. VIII, p. 443, et seq. See, also, the recent article by Dr. Delafield in the *Medical Record*, September 12, on "Post-typhoid Sepsis," abstracted in our next issue.

Miscellany.

Information Wanted of a Fraudulent Agent.—Dr. W. H. Snyder, who recently reported a fraudulent solicitor for *Colliers' Weekly*, reports that Mr. L. H. Bortner, the local manager for Collier, called and fulfilled the contract, although they did not receive the money. Mr. Bortner, whose address is 50 Law Building, Toledo, Ohio, wishes information of any other physician who subscribed with this agent or information as to the agent's whereabouts.

Marriages.

James Ingersoll Wernham, M.D., to Miss Winifred Patrick, both of Marengo, Ill., September 9.

Oscar L. Fullerton, M.D., Redding, Iowa, to Miss Eva L. Johnson of Neva, Mo., September 2.

Clifton Meredith Miller, M.D., Richmond, Va., to Miss Mary Ashley Bell of Fluvanna County, Va., at Wilmington, Va., September 3.

James V. Cornish, M.D., Quincy, Ill., to Miss Lettie S. McConnell of Ellington Township, Adams County, Ill., September 6.

Deaths.

Charles F. W. Myers, M.D. College of Physicians and Surgeons, New York, 1874, a member of the American Medical Association; lieutenant colonel and medical director, N. G., N. J., and a member of the Association of Military Surgeons of the United States, who had been in ill health for several years, died August 31, from apoplexy, at his home in Paterson, N. J., aged 54.

Nelson V. Prewitt, M.D. University of Virginia, Charlottesville, 1893, of Winchester, Ky., a member of the Clark County Medical Society, Kentucky Valley Medical Association, Kentucky State Medical Association and the American Medical

Association, died at St. Joseph's Hospital, Lexington, Ky., September 1, 36 hours after an operation for appendicitis, aged 32.

William Cary Barrett, M.D. University of Buffalo, N. Y., 1880, dean of the dental department of the University of Buffalo, oral surgeon at the Buffalo General Hospital and eminent as a practitioner and teacher of dental surgery and pathology, died at Bad-Nauheim, Germany, August 22, from heart disease after an illness of a year, aged 69.

K. O. Austin, M.D. College of Physicians and Surgeons of Chicago, 1896, was found dead in his office in Chicago, September 7, aged 38. The coroner's jury found that deceased had taken hydrocyanic acid with suicidal intent while laboring under great mental depression following determined attempts to rid himself of his craving for morphin.

Harry De Haven Cameron, M.D. College of Physicians and Surgeons, New York, 1889, of Brooklyn, and surgeon of Troop C, N. G., N. Y., who served during the Spanish-American War in Porto Rico, died from consumption, September 4, at Pony, Mont., after a long illness, aged 37.

William T. Dalby, M.D. Omaha Medical College, 1885, health commissioner of Salt Lake City for four years, and local surgeon of the Union Pacific Railway, died at his home in Salt Lake City, September 7, from cancer of the stomach, after a lingering illness, aged 44.

Jesse C. Pfaffer, M.D. Medico-Chirurgical College, Philadelphia, 1902, *interne in charge of the orthopedic department of* the Medico-Chirurgical Hospital, died at St. Joseph's Hospital, Philadelphia, September 6, from typhoid fever after an illness of ten days, aged 22.

Emily R. Robbins, M.D. Penn Medical University, Philadelphia, 1857, said to have been the first woman to obtain a medical diploma in America, died at her home in Philadelphia, September 1, aged 71.

Henry S. Cunningham, M.D. Starling Medical College, Columbus, 1865, for twenty-five years a resident of Indianapolis, died, at his home in Alva, Okla., September 5, after an illness of five years, aged 64.

James A. Mawris, M.D. Albany (N. Y.) Medical College, 1853, surgeon of the 178th New York Volunteer Infantry in the Civil War, died at his home in Lafayette, N. Y., September 2, aged 78.

Alonzo Richardson Morgan, M.D. Homeopathic Medical College, Philadelphia, 1852, of Waterbury, Conn., died at the Massachusetts Homeopathic Hospital, Boston, August 31, aged 73.

J. T. Walpole Kerns, M.D. Marion-Sims College of Medicine, St. Louis, 1892, died at his home in Bellaire, Ohio, September 8, from Bright's disease, after an illness of two months, aged 62.

Quincy J. Winsor, M.D. Western Reserve University, Cleveland, 1884, was found dead at his home in Cleveland, September 7, from asphyxiation by gas, or heart disease, aged 40.

John M. Kitchens, M.D. Medical College of Alabama, Mobile, 1885, died at his home in Hartsells, August 30, from tuberculosis of the liver, after an illness of eight weeks, aged 50.

Henry S. Ballou, M.D. Bellevue Hospital Medical College, New York, 1880, died at his home in Monument, Colo., September 1, from eczema, after an illness of fourteen weeks, aged 55.

Luis P. Walton, M.D. College of Physicians and Surgeons, New York, 1870, of New York City, died suddenly from heart disease at the Bath Club, London, Eng., September 8.

James C. Clark, M.D. Atlanta (Ga.) Medical College, 1873, died at his home in Covington, Ga., September 7, after an illness of six weeks, from typhoid fever, aged 54.

Samuel C. Cravens, M.D. Rush Medical College, Chicago, 1866, died at his home in Bloomfield, Ind., September 5, from paralysis, after an illness of two days, aged 64.

Orville C. Bordwell, M.D. Eclectic Medical Institute, Cincinnati, died at Newfane, Ohio, August 29, aged 71.

Deaths Abroad.

Joseph Schnetter, M.D. University of Würzburg, Germany, for forty years a practitioner of New York City, but later a resident of Karlsruhe, Germany, died at Herrenalb, Black Forest, August 16, aged 81.

John Thomas Griffith, M.D. St. Andrews, Scotland, 1859; F.R.C.S. Eng., 1850; M.R.C.S., 1845; L.S.A., 1849, for more than thirty years a practitioner of London, and a civil surgeon in the South African campaign, died recently at Weybridge, Surrey, from paralysis, aged 82.

Association News.

The Prize Essay of the American Medical Association.

A gold medal, value $100, is offered annually by the American Medical Association for the best essay on any subject relating to medicine or surgery. The successful contestant for this prize *may choose to receive either, 1, the gold medal,* or 2, a bronze replica of the medal and the remainder of the appropriation (about $90) in money; or 3, the entire amount ($100) in money. Since the Association annually sets apart the sum of $500 for original research, this prize is offered to stimulate the production of a superior practical essay based either on experimental studies or clinical investigation or both. The committee will give preference to essays having the greatest brevity consistent with thorough consideration of the subject, and recommends that essays shall not exceed 5,000 words. The committee, while not restricting the choice of subjects, *recommends as an important subject for consideration:* "The Therapeutic Value of the Digestive Ferments." *Competing essays must be typewritten and must bear no mark* revealing their authorship; but instead of the name of the author there must appear on each essay a motto and accompanying each essay must be sent a sealed envelope containing the name of the author and bearing on its outer surface the *motto of identification.* No envelope will be opened by the committee until a decision has been reached as to the most deserving essay. The other essays will be returned to their respective authors. The committee reserves the right to reject all essays *if none are found worthy of the Association medal. Competing essays must be in the hands of the chairman of the* committee not later than April 1, 1904.

Committee: Lewis S. McMurtry, Louisville, Ky., Chairman; Burnside Foster, St. Paul; M. H. Fussell, Philadelphia.

Medical Organization.

MEDICAL ORGANIZATION METHODS AND BENEFITS.

J. N. M'CORMACK.

(Concluded from page 677.)

ADMISSION OF FORMER SECTARIANS.

Under the present plan of organization this is a question which each county society must decide for itself. It is a question, too, about which there is room for honest difference of opinion. The habits of thought and prejudices of a lifetime can not be overcome in a day, even though conditions causing them have largely disappeared. There need be no haste about it, and with the element of time, and an abundance of good temper on all sides, a fair and just consideration of the rights and interests of all concerned can be secured. As a matter of expediency it will usually be better not to invite persons about whom there is likely to be any dispute to the initial meeting. Their presence might interfere with the free consideration of the subject which its importance demands, or some injudicious person on either side might give or take offense. After the society is organized it can decide whether or not it will consider the matter then, refer it to a committe to report at some future meeting, or postpone it indefinitely. It will be found that the objections to the admission of these people are usually founded on a misconception of the provisions for it made in the by-laws. If legally registered and otherwise reputable, they are entitled to membership on condition that they have or will sever their connection with all sectarian organizations, and come to us as citizens, not aliens. When so elected they are no longer homeopaths or eclectics, but are promoted to be plain physicians, like the other of us. Many of them are entirely worthy of admission. It will be found that most of them became sectarians by chance, as it were, and attended college and graduated before they really knew anything of sects or systems of medicine. Most of them have been broadened by actual experience until they differ from us in views and methods as little as we differ from each other, and have long been homeopaths or eclectics only in name. Many of them are recognized as physicians of ability, and as powers for good in the community, and if they are willing to meet the conditions of our invitation, made fair and honorable for them and us, and come into an organization in which they are hopelessly outnumbered, there seems every reason for accepting them, especially as in most sections they are so few in numbers as to be cut off from any society unless they join ours. It is due all concerned that this whole matter should be dealt with in a spirit of the utmost frankness and kindness, so that a suggestion made in the interest of harmony may not, by either accident or design, be turned into an apple of discord. In this connection it may be said that two inquiries have been received as to osteopaths. This is a passing fad which has about settled itself. They do not claim to be physicians and should not be so considered anywhere.

CROOKED STICKS.

In a like way may come up the question of the advisability of admitting to membership those who have been more or less unethical and off color in the past. Each case of this kind will have to be considered and decided on its merits, but it should be done on liberal lines. In a county where no organization worthy of the name existed, and where each physician has been forced to decide all the nice questions of professional conduct as they arose on his individual and untrained judgment, this important part of medical education having been entirely neglected in all our colleges, it will usually be found that there is no well-defined borderland between correct and incorrect methods except on the part of those governed by native gentlemanly instincts. It will often be found that lack of courtesy, or more or less vicious unprofessional methods, have been handed down in both town and country from generation to generation of physicians, and that those now in practice there are largely the victims of this inheritance. In all of these matters, as in the consideration of the sectarian problem, the profession is confronted by a condition, not a theory. Legally and in the public estimation these men are physicians and the profession is held responsible for them whether it will or not. Most of them are not bad men. These things being true, it will be better to give all who will come in a cordial welcome, and for a united profession, kindly and in good faith, to encourage every effort they can be induced to make to refrain from methods into which they drifted through lack of training and environment for which they are not personally responsible. In regard to the whole subject of the admission of members, and still more of their treatment after admission, it should be urged that a spirit of conciliation be substituted for the old one of suspicion, selfishness and ostracism.

In handling all of these questions, and those concerned and affected by them, as in the discharge of all of his duties, the councilor will find constant need for a fair knowledge of human nature, especially as modified in the genus homo medicus, tact, sound judgment, and never-failing good temper.

THE MEETING AND ADDRESS.

His audience selected and assembled, the councilor should proceed with his address, beginning usually with a brief history of the origin and progress of the reorganization movement. The importance of the county societies, their relations to the state association, and the necessity for coincident membership in both, and for the support of the state association as a bond of union and agency for concentrating and carrying out the views of the profession of the state in all matters of public concern, should be fully explained. In a like way the connection of the state organization with the American Medical Association, and the privilege which each one joining his county society has of membership in the national body, should also be fully explained. They should be advised that a full return for the membership fees in all these bodies will be received from their periodicals, to say nothing of the other advantages. The monthly bulletin or journal, or the annual volume of transactions of the state association will be sent free to all members, and the great weekly, The Journal of the American Medical Association, will go free to all who join that body. The value of these publications in all this work is so great that pains should be taken to make their relation to the membership clear. They all belong to the profession, and it alone receives the profits of their publication. This is as true of The Journal of the Association as of the state journals. Aside from the desire they have to discharge all the duties of their respective positions, and the justifiable pride they feel in its great success, the Board of Trustees, the Editor and the other officers have no more stock or interest in The Journal than the humblest member. For these reasons, and because of the many benefits they will receive from it, each of them should be advised to obtain full membership in all these bodies, and blanks should be furnished the secretary for this purpose.

Having made the plan, purposes and privileges of the system of organization plain, he should then take up and deal kindly, but frankly and unsparingly, with existing evils, and their causes and results, in a general way, putting his discussion of these, and of the attainments and possibilities of the profession through union and co-operation in each community, on such a high plane as will make their local dissensions appear very insignificant. The advantages it will bring to them individually—scientific, social and material—the desirable and deserved position it will give the profession in public estimation, as well as the assistance it will give in securing and enforcing needed health and medical legislation, should be dwelt on.

He should also urge that just as the efforts and success of each county society will determine the results of this reform, so the character of the individual physician, each of those present, is to be the potent factor on which the efficiency and standing of that society will depend. It should be represented that no chain can be stronger than its weakest link, and the qualifications and accomplishments which each ought to strive for as a member of a great profession to which he is responsible, and which is equally responsible for him, should be earnestly put before them. It should be insisted that above all things the physician should be the cleanest man in the community in the best sense. He should be the cleanest man physically, because this is of importance in the practice of modern medicine, and a necessity in surgery and obstetrics. A slovenly doctor with soiled clothes, hands and nails is a constant menace. He should be a clean man morally, because he comes into such relations and confidences with families, and especially with young people, as to demand it. He should be the best supported man in his community, because he can not otherwise keep up the education and equipment essential alike to his own reputation and the well-being of the community, and because he is the hardest worked man in it. The lawyer, the banker, the merchant and the laborer go home after a day of toil to a night of rest, but the physician's work, like Joan's, is never done. His home should be a center of refinement and culture, and he should be a well-informed man outside of his profession, an authority on general scientific subjects, or a specialist in some attractive by-science, not only because he represents a learned profession, but because of the mental relief, breadth and power it would give him. In a word, he should be the educated, refined, courteous gentleman whom the best fathers and mothers would chose as an advisor and model for their sons. The qualifications and accomplishments which go to make a gentleman are not possible to all men, on account of inherited or other defects, but if by association and encouragement these can be induced to imitate gentlemen, so far as possible, it will be a great gain for them, the profession and the community.

ORGANIZATION OF THE SOCIETY.

At the conclusion of his address, unless some other arrangement seems more desirable, it will usually be well for the councilor to preside temporarily, and to call for a general discussion of the subject, indicating some suitable person to open it. If an organization is decided on, a good committee should be selected by those present to nominate the officers. Much will depend on the choice of the first officers, and they should not usually be named in open meeting. The secretary especially should be an active, tactful man, living at or near the county seat. The delegate to the state association should be a broad, representative man, who will attend and give his time to the duties of his office. Following the report of the committee and the election of officers, the constitution and by-laws should be considered and adopted. If possible, the councilor should exhibit the card index outfit for county societies, and instruct the new secretary as to the method of keeping it and its far-reaching purposes. The dues for the county and state societies should always be collected from charter members by the secretary on the day of organization, and from new members when they apply, and the charter should be applied for at once. The best methods for bringing in any physicians in the county who are not present, and for meeting any difficulties likely to arise in making the society a success, should be inquired into while the councilor is present to give the benefit of his experience. Before final adjournment, the program should be arranged for the next meeting, which should always include a lunch, or refreshments in some form, to follow some interesting scientific work. If possible, the councilor should arrange to be present at some future meeting, and to keep in touch and be at the service of the society for any help he can give them. In this connection it should be said that in several states the council has called for volunteers and published a list of leading men distributed over the state or on the border of adjoining states, who will go on invitation and give their assistance to any county society within reach of them. This can easily be made of great assistance to new county societies if experienced and unselfish selections are made, and the plan is suggested for careful consideration.

SMALL AND SPARSELY SETTLED COUNTIES.

To most physicians the glamor of numbers, of a crowd, of elaborate papers and sonorous discussions is always associated with the idea of a successful medical society. Next to the conviction that physicians can not live together in peace, it will be the most difficult of the misconceptions councilors will have to combat. Yet nothing could be further from the truth. The New York Obstetrical Society, one of the most famous and useful of the older organizations in this country, was limited by its charter to fifteen members. When five, eight or ten congenial medical spirits get together and fail to have an interesting and instructive meeting it is not the fault of those who are absent. One of the most useful societies the writer has ever known was organized by him on a chance visit in a county containing but four physicians. They were torn by the usual wrangles and dissensions, and the profession was at a low ebb. Three of them were comparatively young men, and after getting together in their society, and understanding each other, one after the other in turn went away for post-graduate work, the others dividing his work and giving him the proceeds. One of them had a taste and ability for surgery, and by an equitable and satisfactory arrangement he did that part of the practice, which had formerly been sent away or been done by surgeons called from a distance, at far greater expense and probably no better results, or more frequently the cases were left to suffer and die without attempt at relief. Under better business methods a large element in the community which had found it cheaper to change physicians than to settle their accounts, although abundantly able to do so, were induced to contribute their part to such a support of the profession as enabled its members to qualify and equip themselves for the benefit of these as well as their more honest neighbors. This society was as much a blessing to the people of that community as to the profession, and organized and conducted in the proper spirit this will always be true. Of course, much must be left to the discretion of the councilor after he has informed himself as to the conditions by conference with the physicians in such counties, but where as many as three, four or five fairly young, live men can be found it will be better for them to get together and maintain a separate organization. If they can be made to understand it and each other it is a question whether the individual benefits will not be even greater than will come to those of the more densely populated counties. Where there are less than the number indicated, or for any reason a society can not be maintained, in counties of this kind the physicians in them should hold their membership in an adjacent strong society, or two or three such counties should be joined together in a hyphenated society, as provided in the by-laws.

COMPENSATIONS OF COUNCILORS.

At the outset it was intended to recommend that a paid organizer be employed by each state association, who could devote his entire time to the work. Owing to lack of funds and other reasons it appeared more desirable to provide for volunteer workers in smaller fields, with only their actual expenses paid, and finally the council, as an executive committee, with large discretionary powers, and with its individual members as organizers and supervisors of county societies, was the outcome. These expenses should always be paid promptly and cheerfully. As a business proposition the state associations can make no better investment. The other compensations of the councilor are large and varied. It gives him an extensive and desirable acquaintance, broadens his own mental horizon, and offers an opportunity of real good to his fellows almost beyond conception. To return to a county and find harmony and co-operation substituted for dissensions and enmity, to find that some have taken post-graduate courses, that others have taken up their studies at home, and that all, or nearly all, are united for the advancement of the profession, will be his ample reward.

HOUSE OF DELEGATES.

The duties of this body are so fully defined in the by-laws that little more need be said here. Its program should be entirely distinct from that for the general meeting, following it in the same leaflet. The first meeting of the house should be held in the afternoon of the day preceding that fixed for the annual session. By holding an afternoon and evening session then the business may usually be so advanced as to enable delegates to enjoy much of the privileges of the general meetings. Its hall should be commodious and comfortable, with convenient rooms for committees, and sufficiently remote from the general meeting as to avoid interruption from each other, should it become necessary for both bodies to be in session at the same time. At least one session should be devoted to the discussion of the health and medical laws of the state. The state board of health and the state board of medical examiners should be invited to attend and take part in this discussion with the view of securing harmony of views and concert of action in procuring and enforcing such legislation. Detailed reports should be heard as to the condition and needs of the profession in each county, from its delegate, supplemented by suggestions from the councilor of the district. To do all of this properly it may sometimes be necessary for the house to sit while the general meeting is in session on the second or third day, or to remain in session for a day after the general meeting adjourns. As this body will grow in importance and occupy more and more time with a proper discharge of its duties, no one should accept the position of delegate who will not devote himself to the work and remain until it is completed.

THE GENERAL MEETING.

The functions and purposes of the general meeting are so well understood as to require little discussion. Freed from the time-consuming distractions of all miscellaneous business, and relieved of the duty of electing the officers, it can in future devote its entire time to scientific work. The writer recently had the privilege of attending such a meeting. Under a model program, the invocation address of welcome and response were followed by the first symposium, without an intervening motion. During three days but one item of miscellaneous business was suggested, and this was referred to the house of delegates without debate. Under such an arrangement ample time was afforded for the full discussion of papers and scientific reports, the program was completed and the interest was fully sustained until the final adjournment. The majority of physicians take little or no interest in the ordinary legislative proceedings of state associations, and as soon as it is known that these parliamentary wrangles and tedious discussions are things of the past there promises to be a class of attendance and revival of interest very much to be desired.

THE CARD INDEX REGISTER.

Before the profession can be permanently organized, or as a part of such work, it is necessary to know who compose it, where they live, and the professional status and antecedents of each one. This is also necessary as the first step in purging our ranks of the dishonorable and criminal classes—the quacks—who have donned our livery for their own nefarious purposes. Experience in a few states shows that reputable physicians will gladly furnish the information of themselves if it does not involve too much trouble, and it must be had of the disreputable ones, even at much cost and trouble. The difficulties involved in this only emphasize the importance of undertaking it without further delay. As in other phases of organization, the difficulties are exaggerated, and where a live county society exists, except in the large centers of population, they are easily overcome. Once the information is obtained in regard to any individual—a quack, for instance—and a label is put on him, by a systematic exchange of cards between states he can be followed and his status and identity determined anywhere. Likewise, by the use of universal transfer cards, a reputable physician moving to another county or state is at once admitted without delay or duplication of dues.

In order to have this system uniform and economical, the Association has provided a series of cards for all county and state organizations, and has arranged for county and state outfits at wholesale net prices for the benefit of every state in the Union which desires to adopt the system. These state outfits include cabinets and all the necessary record, guide and index cards, with capacity based on the number of physicians in the state, complete and ready for use. The county outfits include a box neatly labeled for each county, with an ample supply of record and transfer cards for members and nonmembers, and an alphabetical index, except in counties containing large cities, where small cabinets are figured. The cost of the state outfits will vary with the number of physicians. The cost of the county outfits for less than 100 physicians will be about 50 cents each, but in order to get the benefit of these prices it will be necessary to order for all the counties in a state at one time. Fourteen states have ordered the outfits up to this time, and it is suggested that the cards for each county be filled out in the office of the secretary of the state association, arranged ready for use, and sent to the county by the councilor, or by its delegate, from the next meeting. Blanks to collect all this information, and application blanks for new members, to correspond with the record cards, are furnished by the Association to all societies at the bare cost of presswork and material.

In addition to the value of this register for organization purposes, and as a means of suppressing quackery, the Association proposes to make this officially collected and accurate information the basis for a National Medical Directory. Private individuals are now publishing incomplete and misleading directories, including the names of veterinarians, dentists, and many who do not even have as much claim to professional recognition, at a great cost to the profession. A reliable directory would have great monetary value, which legitimately belongs to the profession, and could also be made very profitable to individual members indirectly. For instance, it is proposed to publish the names of all members of their county and state organizations in bold type, with full information as to their education, society affiliations and positions of honor, while the names of non-members would be in small type, with only the year of graduation and a number to indicate the college. As such a directory would naturally, in a great measure, guide insurance and railroad companies and others in choosing between medical men, its importance to members in this one matter can be readily appreciated. It will be equally useful and important in many other ways. The Journal printing establishment is equipped for getting out such a work, and once set up the same material can be used for the national directory or for any particular state, without duplication, and any of these can be furnished to members at a minimum cost. The outside demands for such a reliable official directory would be large and the profit would go to the Association, which means to the profession, as each member has exactly the same interest in its success and funds.

CONCLUSION.

The Association plan is almost perfect in its conception, scope and purposes, and yet it is believed to be entirely practical. Changes in detail may be required as the work progresses in the various states to adapt it to changed conditions, but these can be easily made. How far its benefits are to be extended to any particular county or state must be determined by its own profession, assisted by every possible influence from the outside when needed. To say that much time and increasing effort will be required to perfect such an organization, that many obstacles will be encountered, and that individuals will fail to do their duty or obstruct the work, is only to say that the undertaking is a vast one, that the agencies relied on are finite and that it is subject to the vicissitudes attending all human endeavor. Our contention is that it is worth all the time, labor and money it will cost, and more. Ours is rapidly becoming a great science. Our leaders are among the greatest of living men. With proper ideals kept constantly before our young men, and the present facilities for attaining them unknown to any other age, and impossible even to the older men of the present generation, with harmony and coöperation made possible and encouraged everywhere, and all supported by a public confidence inevitable because it will be deserved, everything desirable will be brought within reach of the profession. The vexed problem of medical education can then be taken up with confidence and justly and wisely solved. The question of reciprocity in licensure and membership between the states can be settled on some safe and equitable basis. Provision for continuous scientific research and for systematic collective investigation into the causes and prevalence of disease can be made on the broad and generous lines demanded by the great interests involved. Constructive statesmanship can be substituted for the narrow, time-serving political methods of the present in municipal, state and national public health affairs, and our profession, united, educated and ennobled, will then occupy its rightful place as one of the greatest powers for the protection and elevation of the race.

Grundy County (Iowa) Medical Society.

Thirteen physicians of the county met at Traer, September 1, and organized a county medical society.

Ripley County (Ind.) Medical Society.

Dr. George T. MacCoy, Columbus, councilor for the Fourth District, is organizing a county medical society at Versailles.

Whitley County (Ky.) Medical Society.

Dr. Arthur T. McCormack, councilor for the Third District, announces the organization of this society, with Dr. Edwin S. Moss, Williamsburg, president; Dr. C. Garrard Ellison, Williamsburg, vice-president; and Dr. S. Sullivan, Rockholds, secretary and treasurer.

South Dakota Second District Medical Society.

In the September 5 issue of The Journal, the organization of the Codington County Medical Society was noted. This was incorrect, as the meeting was of physicians of Clark, Codington, Deuel, Grant and Hamlin counties, *comprising* the Second District of the state.

Catawba County (N. C.) Medical Society.

A number of physicians of the county met at Newton, September 5, and with the assistance of Dr. Thomas E. Anderson, Statesville, organized a county medical society. Dr. James R. Campbell, Newton, was elected president; Dr. W. L. Abernethy, Hickory, vice-president, and Dr. George H. West, Newton, secretary and treasurer.

Milam County (Texas) Medical Association.

Physicians of Milam County met in Cameron, September 4, and organized a county medical society with the following officers: Dr. Edward N. Shaw, Cameron, president; Dr. I. Coleman, Hanover, vice-president; Dr. I. P. Sessions, Rockdale, secretary and treasurer, and Drs. William W. Greer, Cameron; Albert S. Epperson, Cameron, and Charles W. McBurnett, Minerva, censors.

Gaston County (N. C.) Medical Society.

This society was organized at Gastonia, September 5, by State Councilor Dr. Edward C. Register, in accordance with the reorganization plan of the Medical Society of the State of North Carolina and the American Medical Association, with an initial membership of 19. The following officers were elected: President, Dr. Robert M. Reid, Gastonia; vice-president, Dr. J. Brown Wallace, Mount Holly; secretary and treasurer, Dr. Lucius N. Glenn, McAdenville, and censors, Drs. Charles E. Adams, Gastonia; D. A. Garrison, Bessemer City, and John H. Jenkins, Dallas.

Linn County (Iowa) Medical Society.

This society was organized at Cedar Rapids, September 2, with fifty members, under the constitution and by-laws recommended by the American Medical Association, with the following officers: Dr. Ward Woodbridge, Central City, president; Dr. George R. Skinner, Cedar Rapids, vice-president and delegate; Dr. Hollis W. Bender, Cedar Rapids, secretary; Dr. Frank S. Skinner, Marion, treasurer, and Drs. Austin H. Johnson, Cedar Rapids; John Hamilton, Cedar Rapids, and John W. LaGrange, Marion, censors, and Dr. George R. Skinner, Cedar Rapids, delegate to the Iowa State Medical Society.

Portage County (Wis.) Medical Association.

With the aid of Dr. John F. Pritchard, Manitowoc, councilor for the Eighth District, this society was organized at Stevens Point, September 1, with an initial membership of 13. The plan of organization suggested by the American Medical Association was adopted and the following officers and committees elected: Dr. Galen Rood, Stevens Point, president; Dr. Augustus H. Guernsey, Amherst, vice-president; Dr. Carl von Neupert, Jr., Stevens Point, secretary and treasurer; Drs. William F. Atwell, Daniel S. Rice and Carrie A. Frost, all of Stevens Point, censors, and Drs. Frank A. Southwick, Myron G. Rood and John D. Lindores, all of Stevens Point, committee on by-laws.

Societies.

COMING MEETINGS.

Medical Society of the State of Pennsylvania, York, Sept. 22-24.
American Association of Obstetricians and Gynecologists, Chicago, Sept. 22-24.
American Academy of Railway Surgeons, Chicago, Oct. 1-2.
Colorado State Medical Society, Denver, Oct. 6-8.
Medical Association of the District of Columbia, Washington, Oct. 6.
Idaho State Medical Society, Boise, Oct. 8-9.
Mississippi Valley Medical Association, Memphis, Tenn., Oct. 7-9.
Vermont State Medical Society, Bellows Falls, Oct. 15-16.
New York State Medical Association, New York City, Oct. 19-22.

American Academy of Railway Surgeons.—The academy will meet at the Great Northern Hotel, Chicago, October 1 and 2, under the presidency of Dr. Luther Sexton, New Orleans. An interesting program is announced.

Nashville Society of Colored Physicians.—At the annual meeting, September 1, Dr. C. O. Halley was elected president; Dr. W. A. Reed, vice-president; Dr. A. M. Townsend, secretary, and Dr. Preston R. Burrus, treasurer.

Ohio Valley Medical Association.—This organization will hold its next annual meeting in Evansville, Ind., Nov. 12 and 13, 1903. The field of its membership has been extended to cover the four states of Ohio, Indiana, Illinois and Kentucky.

Medical Society of the State of Pennsylvania.—Extensive preparations are being made at York for the entertainment of the members of this society, which holds its annual meeting, September 22-24, under the presidency of Dr. William M. Welch, Philadelphia.

Henry County (Ky.) Medical Society.—At the annual meeting held in New Castle, August 26, Dr. C. R. Martin, Sulphur, was elected president; Dr. John C. Cassity, Eminence, vice-president; Dr. John Nuttall, New Castle, secretary, and Dr. Albert P. Dowden, Eminence, treasurer.

Reading (Pa.) Medical Association.—At the annual meeting held August 31, the following officers were elected; President, Dr. John Shartle; vice-president, Dr. Harry F. Rentschler; secretary, Dr. Clara S. Keiser; treasurer, Dr. Oan J. Thompson; censors, Drs. Fremont W. Frankhauser, Israel Cleaver and James W. Keiser, and curator, Dr. S. Banks Taylor.

Morehouse County (La.) Medical Society.—At the annual meeting Dr. Charles D. Clark, Mer Rouge, was elected president; Dr. A. W. Jones, Jones, vice-president, and Dr. Otis M. Patterson, Bastrop, was re-elected secretary and treasurer. The society adopted the new constitution and by-laws of the Louisiana State Medical Society, in order to affiliate with that organization.

West Tennessee Medical, Dental and Pharmaceutical Society.—This society, whose membership is made up from colored physicians, dentists and druggists, was organized at Humboldt, August 26 and 27. The following officers were elected: President, Dr. I. S. Sawyers, Humboldt; vice-presidents, Dr. R. G. Martin, Memphis, and T. L. Anderson, Ph. C., Jackson; secretary, W. D. Holder, D.D.S., Jackson; corresponding secretary, Dr. W. A. Cocolough, and treasurer, Dr. John L. Light, Jackson.

Mississippi Valley Medical Association.—The 1903 meeting of the Mississippi Valley Medical Association will be held at Memphis, Tenn., Oct. 7-9, 1903. An excellent program has been prepared and a large attendance is anticipated. The profession of the lower part of the Mississippi Valley, it is expected, will be largely represented at this meeting, and it is to be hoped that there may be a good attendance from the northern part of the middle west. Memphis is accessible by direct railroad connection with most cities of the middle west.

New Hampshire Surgical Club.—This organization held its eighth annual meeting at North Conway, September 3. Fifty members were present. Dr. Milton S. Woodman, West Lebanon, read a paper on "Carbuncle," which was discussed by Dr. Charles R. Walker. A paper on "Pathology and Surgical Treatment of Bright's Disease" was presented by Dr. Seth Chase Gordon, Portland, Maine. A banquet followed, at which Dr. James I. Greeley, Nashua, acted as toastmaster. The officers elected are: President, Charles R. Walker, Concord; vice-president, Dr. J. Franklin Robinson, Manchester; secretary and treasurer, Dr. Nelson W. McMurphy, Concord; executive committee, Drs. Charles R. Walker, N. W. McMurphy, P. T. Haskell and D. S. Adams.

BUFFALO ACADEMY OF MEDICINE.

Special Meeting, held Sept. 8, 1903.

President, Dr. Joseph W. Grosvenor, in the Chair.

Fourth of July Legislation.

A special meeting was held September 8 in order to have preventive measures adopted by city ordinances to lessen accidents from Fourth of July explosions and from bonfires.

Proposed Ordinances.

Dr. Lucien Howe presented a set of ordinances and stated the reasons for their adoption. The ordinances are as follows:

Section 1. The sale of any fireworks containing dynamite or any other explosive more powerful than ordinary black gunpowder to any person without permission from the mayor, or the sale or gift to any child or children without the written consent of the parent, of any gun or pistol, of any kind of toy cannon, or any firecracker or torpedo, rocket, balloon or other forms of fireworks or explosive is hereby prohibited.

Any violation of the provision of this section will subject the offender to arrest and fine of $50 for each offense.

Sec. 2. No person shall fire or explode or send off in any avenue, street or alley in the city of Buffalo, any firecracker or torpedo, rocket, balloon or other forms of fireworks or explosives, nor build bonfires, nor discharge any cannon, gun, pistol or any other firearm, or any gun loaded with a dangerous missile.

Any violation of this section shall subject the offender to arrest and fine of not less than $10 nor more than $25 for each offense. Moreover, the offender, or, if he be a minor, his parents or guardian, shall be held responsible for any injury which may result directly or indirectly to person or property from any such explosives or fires.

The provision of this section shall not apply to the public parks, but it shall apply to the streets or avenues connecting these parks with each other.

Sec. 3. Any person, not an employé of the police department, who shall furnish evidence leading to the conviction of one who has violated either of the two preceding sections of this ordinance, shall be entitled to receive half of the fine imposed.

Accidents in Buffalo.

Dr. Howe stated that there have been 209 recorded accidents from Fourth of July celebration in Buffalo since 1895. Last year 60 were reported and there are doubtless many more accidents which are not reported at all. Boston, Providence, New York, Philadelphia, Cleveland and St. Paul have all adopted restrictive ordinances. He stated that this ordinance would permit the boys to use the parks only for firing off fireworks, and the use of those places would have to depend on the park board.

Superintendent of Police Bull suggested that the ordinance should be so framed as to be enforced. The restrictions should be placed on toy pistols, toy cannons, giant crackers and giant torpedoes. The sale of cartridge pistols to children under 16 years is already prohibited. To make the parent responsible for the use of pistols in the main is imperative, for if the parent can be reached by the police department the regulations can be enforced.

Health Commissioner Green stated that there were 459 cases of tetanus in this part of the country as a result of injuries received the last Fourth of July. The toy pistol that discharges a small cartridge does the most harm. If dealers are allowed to sell dangerous fireworks children will get them.

Dr. Roswell Park estimated that 8,000 deaths from tetanus as a result of the toy pistol had occurred in this country in the last twenty years.

Co-operative Committee Appointed.

A resolution was passed naming a committee of five to cooperate with different departments of the city government and with various public bodies to bring about the enactment of an ordinance embodying the propositions laid down in the draft presented. Drs. Lucien Howe, Walter D. Greene, Roswell Park, Eugene Smith, and Peter W. Van Peyma were appointed as such committee.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Eczema.

Success in the treatment of eczema, according to G. P. Katzenstein in the *Post Grad.*, depends on the practitioner's ability to observe the various types and stages of the disease. Attention, according to the author, must be directed to the patient's general health, diet, constipation, urine and personal hygiene; when indicated, tonics should be given, such as strychnin, iron, quinin and cod-liver oil.

He recommends the wine of antimony in doses of ten or fifteen minims in the treatment of the acute stages of the highly inflammatory eczemas.

If lithemia is present it must be corrected. Arsenic must not be employed in the acute or subacute eczemas, as it stimulates the nerves of the skin and aggravates the condition. In the chronic dry forms and the recurrent eczema of the hands and feet it is useful, serving as a tonic to the vasomotor system. The use of soap must be avoided, instructing the patient to use cold cream, sweet oil or olive oil in removing dried crusts and exudates.

Itching, which is the prominent subjective symptom, may be allayed by the use of phenol, resorcin, camphor, menthol and oil of cade prescribed in the following combinations:

R.	Phenol	gr. x-xx		65-1.30
	Hydrarg. chloridi mitis	gr. xx-xl	1.30-2	65
	Pulv. zinci oxidi			
	Pulv. amyli, āā	ʒii	8	
	Petrolati	ʒiv	15	

M. Ft. unguentum. Sig.: Apply locally.

In conjunction with the foregoing ointment the following lotion may be applied locally through the day:

R.	Resorcin		
	Acidi borici, āā	ʒi	4
	Pulv. zinci oxidi	ʒii	8
	Glycerini	ʒi	4
	Aquæ q. s. ad	℥iv	120

M. Sig.: Apply locally during the day.

In the vesicular form of eczema and in eczema rubrum accompanied by exudation the following is serviceable as a cooling ointment:

℞.	Camphoræ	gr. xv	1	
	Phenol	gr. xx	1	30
	Pulv. zinci			
	Kaolin			
	Aquæ			
	Petrolati, āā	ʒi	4	

M. Sig.: Apply locally.

Where a protective dressing is indicated the following may be applied:

℞.	Glycerini		
	Gelatin, āā	℥iss	45
	Pulv. zinci oxidi	℥iii	90
	Aquæ	℥iv	120

M. Sig.: Heat over a water bath, and while warm apply locally and cover with cotton.

Ointments containing oil of cade, salicylic acid and ichthyol are more useful in the treatment of the chronic papular forms of eczema where stimulation is required.

For the eczemas of children, which occur in the summer, the following lotion is preferable:

℞.	Resorcin		
	Glycerini, āā	ʒi	4
	Pulv. zinci oxidi	ʒii	8
	Acidi borici	ʒi	4
	Ol. amygdalæ dulc.	℥ii	60
	Aquæ calcis q. s. ad	℥iv	120

M. Sig.: Apply locally.

Eczema appearing on the hairy regions of the body can be benefited by applying the following lotion:

℞.	Resorcin		
	Glycerini		
	Acidi borici, āā	ʒi	4
	Aquæ q. s. ad	℥vi	180

M. Sig: Apply locally

In the dry form of eczema, accompanied by itching and induration, the following is recommended by the author:

℞.	Phenol	gr. x		65
	Olei cadini	m. xl	2	65
	Pulv. zinci oxidi			
	Pulv. amyli, āā	ʒii	8	
	Petrolati	ʒiv	15	

M. Ft. unguentum. Sig.: Apply locally.

Turpentine in Pneumonia.

The oil of turpentine, according to an abstract in *Merck's Archives*, has been used by W. Thomas of Rhyl very successfully in the treatment of pneumonia. He regards it as almost a specific in those cases complicating influenza. It must be given early, persistently and in adequate doses. He first gives a good dose of calomel and subsequently the following mixture:

℞.	Olei terebinthinæ	ʒii-iv	8.-15
	Pulv. tragacanthæ comp.	ʒi	4
	Spts. ammon. arom.	ʒii	8
	Spts. chloroformi	ʒii	8
	Aquæ q. s. ad	℥viii	240

M. Sig: One teaspoonful every four hours.

The symptoms are rapidly ameliorated, the furred tongue cleansed and moistened, the appetite improved and the bowels opened. The virtues of the turpentine are supposed to be in its antiseptic properties, its ease of absorption, and its stimulating qualities.

Valerian.

The newer remedial agents, according to S. E. Earp in *Med. and Surg. Monitor*, have proven so satisfactory in the treatment of disease that the practitioner sometimes erroneously expects them to accomplish everything and thus reject the old remedies to the detriment of the patient. He therefore reviews the therapeutic action of valerian, the value of which has been proven. The tincture, in strength of 20 per cent., and the ammoniated tincture are the preparations most frequently used. They may be given in doses ranging from one to two drams, flavored with gaultheria or peppermint. He recommends it in cases of delirium tremens, coughs of reflex origin, hysteria and insomnia. The following combinations are recommended by the author:

℞. Tinct. valerianæ ammon. ....℥ii 60|
Tinct. piscidiæ
Elix. simplicis, āā....................℥i 30|
M. Sig.: One dessertspoonful every two to six hours.

In nervous disorders of women the following may be given:

℞. Tinct. valerianæ ammon.
Spts. etheris comp.
Tinct. humuli, āā....................℥ii 60|
M. Sig.: Two teaspoonfuls in water every hour or two hours.

If this preparation is not given judiciously, according to the author, toxic effects may arise such as are shown by dizziness, vomiting, hiccough, eructations, diarrhea.

In many hysterical disorders the practitioner prescribes preparations containing chloral, potassium bromid, or opium when a proper knowledge of the pathology of the disease would show their contraindication, and the ammoniated tincture of valerian could be of service.

In insomnia from overwork or from leading a strenuous life it is of value, as well as in those cases of insomnia in patients recovering from la grippe, using this preparation as a substitute for the hypnotics.

The dentist could use it with advantage in those nervous cases brought on from the shock of the operation. In disturbances of the menopause or in nervous headache due to excitement it is a valuable antispasmodic. In the neuroses where the heart's action is accelerated or the respiration quickened or in cases of melancholia and hypochondriasis, valerian is of value. He especially emphasizes the importance of valerian in the nervous diseases of children where opium is too often used in its stead, which enhances the dangers of the child's life and aggravates the disease.

Medicolegal.

Amputation Below Elbow Constitutes "Loss of an Arm."—The Supreme Judicial Court of Massachusetts says, in the case of Garcelon vs. the Commercial Travelers' Eastern Accident Association, that it considers the amputation of an arm a little below the elbow to be the loss of an arm in the common acceptation of those words, and within their meaning as used in a policy which specifies merely the "loss of an arm," without mentioning whether the loss is by amputation below or above the elbow joint.

Showing Employment of Physician to Make Examination.—In the case of the Allen B. Wrisley Company vs. Burke, which was brought by the latter party to recover for personal injuries, in the cross-examination of a physician who testified in behalf of the company as to the condition, physically, of the party suing soon after the injury was received, it was developed that the physician had been employed to make the examination for the purpose of becoming a witness in the case, and had been paid for his services in so doing. The fact that the physician had been engaged and paid to make the examination, and for the purpose of giving testimony in the case, the Supreme Court of Illinois holds, was proper for consideration, as bearing on the weight and value of his testimony. The fact that, in developing the proof that the witness was employed and paid to make the examination, it incidentally appeared he was paid by an accident company, did not constitute error demanding the reversal of the judgment.

No Compulsory Examination in Slander Case.—The Court of Criminal Appeals of Texas says that, in Bowers vs. State, a criminal prosecution for the slandering of a female, where the defense consisted of an effort to prove the truth of the allegation; that is, that the accused had had carnal intercourse with the prosecutrix, a motion was made to have the trial court order an examination of the private parts of the prosecutrix by reputable physicians, alleging that such examination would show that her hymen had been ruptured and destroyed by a male organ penetrating the same. This motion was objected to by the state on the ground that the court had no authority to make such order, and the court sustained the objection, and declined to appoint the committee of physicians, and to authorize them to subject the prosecutrix to a private examination. In refusing to make the order, when the prosecutrix objected to the examination, the Court of Criminal Appeals holds that the court below did not err. Of course, it says, if the prosecutrix had been willing to submit to the examination, and such examination would tend to solve a disputed issue in the case, it would be entirely competent for the court to make the order.

Not Competent to Testify as to Miscarriage.—The Court of Appeals of New York holds, in the personal injury case of Gray vs. the Brooklyn Heights Railroad Company, that lay witnesses, even with some experience in midwifery, should not be permitted to compare germs of life at its earliest stage and announce their conclusions. The subject is not a matter of common knowledge or observation. Here the injured party commenced to bleed after a slight jolt in a street-car collision. Soon after, something about as large as an egg, and colored like blood, passed from her, and after that she bled for about two weeks longer. Whether or not it was a miscarriage was in dispute, and she was permitted to state that it was one. The other women, who claimed to have had miscarriages, were also permitted to state how what she had compared with what passed them. The court holds that these rulings were erroneous. Manifestly, it says, these witnesses could not have expressed the opinion directly that the party suing had had a miscarriage, yet each was permitted to express that opinion indirectly by saying, in substance, that what happened to the party suing was the same as had happened to herself, when she had, in her opinion, a miscarriage. She could not say that this party's case was like her own. A witness may testify that he had a cold, as that is a matter of common knowledge and experience, but he can not say, "I had *pneumonia*, and the plaintiff's symptoms were like mine," because it is not the statement of a fact within the range of common knowledge and observation, but of two opinions, both of which are incompetent. The witnesses should have stated the facts only, and the jury, guided by the opinions of the physicians so far as they deemed them reliable, should have drawn the conclusion.

Christian Science and the Treatment of Disease.—The Supreme Court of Pennsylvania says, in the matter of the application of the First Church of Christ, Scientist, for a charter under the laws of the state of Pennsylvania, that the application set forth that the purposes for which the corporation was to be formed were to "establish and maintain a place for the support of public worship and to preach the gospel according to the doctrines of Christ Jesus as found in the Bible and the Christian Science text-book, 'Science and Health, with Key to the Scriptures,' by Mary Baker G. Eddy." The Supreme Court is inclined to think that the evidence was not sufficient to support a finding that the corporation itself was to be one for profit. It says that there was proof that the individual healers, who are constituted and sent out by the society, do receive compensation for their services; but this seems to be a personal recompense, with which the society has nothing to do. But the court below, in its supplemental opinion, went beyond this question, and adopted in substance the conclusion of the master that the practice of the art of healing or curing disease in the manner set forth in Mrs. Eddy's book is injurious to the community, because it is opposed to the general policy of the law of Pennsylvania relative to the existence and treatment of disease. It was the duty of the court below to refuse the charter, if, in the exercise of sound legal discretion, he found its purpose, in whole or part, included anything injurious to the community. Can it be said that there was an abuse of discretion in the finding in this case? We are not to consider the matter from either a theological or metaphysical standpoint, but only in its practical aspects. It is not a question as to how far prayer for the recovery of the sick may be efficacious. The common faith of mankind relies, not only on prayer, but on the use of means which knowledge and experience have shown to be efficient; and when the results of this knowledge and experience have been crystallized into legislative enactments, declarative of what the good of the community requires in the treatment of disease, and of the qualifications of those who publicly deal with disease, anything in opposition thereto may fairly be taken as injurious to the community. Our laws recognize disease as a grim reality, to be met and grappled with as such. To secure the safety and protect the health of the public from the acts of incompetent persons the law prescribes the qualifications of those who shall be allowed to attempt the cure or healing of disease. It is not for the purpose of compelling the use of any particular remedies, or of any remedies at all. It is only designed to secure competent service for those who desire to obtain medical attendance. In certain diseases the individual affected may be the only one to suffer for lack of proper attention; but in other types, of a contagious or infectious nature, they may be such as to endanger the whole community. And here it is the policy of the law to assume control and require the use of the most effective known means to overcome and stamp out disease, which otherwise would become epidemic. In such cases, failure to treat, or an attempt to treat by those not possessing the lawful qualifications, are equally violative of the policy of the law. It may be said that the wisdom or the folly of depending on the power of inaudible prayer alone, in the cure of disease, is for the parties who invoke such a remedy. But this is not wholly true; "for none of us liveth to himself, and no man dieth to himself," and the consequence of leaving disease to run unchecked in the community is so serious that sound public policy forbids it. Neither the law, nor reason, has any objection to the offering of prayer for the recovery of the sick. But in many cases both law and common sense require the use of other means which have been given to us for the healing of sickness and the cure of disease. There is ample room for the office of prayer, in seeking for the blessing of restored health, even when we have faithfully and conscientiously used all the means known to the science and art of medicine. The findings of fact by the learned master, and his conclusions of law therefrom, and the opinion of the court below, in which they are summarized and approved, vindicate the action taken. Under the well-defined policy of the law of Pennsylvania, as at present existing, we are satisfied that there was no abuse of sound legal discretion in refusing the application for a charter. The appeal is quashed, and the order refusing to approve the charter is affirmed.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal.

September 5.

1 *The Adams Stokes Syndrome, with Report of a Case. Peter Bassoe.
2 *The Prognosis and Orthopedic Treatment of Acute Anterior Poliomyelitis. (To be concluded.) Walter G. Stern.
3 *Listerism; Its Past, Present and Future. G. S. Towne.
4 *The Operative Treatment of Tuberculous Glands of the Neck. J. G. Sheldon.
5 *Regicides; Sane and Insane. (Concluded.) E. C. Spitzka.
6 *Hay Fever: A Cause and a Cure. Frank E. Stowell.
7 Celluloid as a Material for Flat-foot Plates. Harold W. Jones.
8 A Case of Atropin Poisoning. C. B. Cortright.

1. **Adams-Stokes Syndrome.**—The points especially emphasized by Bassoe are summarized by him as follows:

1. The Adams Stokes symptom complex is not a clinical entity. It may supervene in various diseases involving the heart, vagus nerves, or medulla oblongata.
2. It is particularly likely to set in when the upper part of the ventricular septum is diseased.
3. Arteriosclerosis is not essential for its production.
4. Its occurrence in a well studied case of localized lesion of the intramedullary portion of the accessorius nerve supports the hypothesis that the inhibitory fibers of the heart are derived from this nerve.
5. A lesion of the ventricular septum is capable of producing bilateral degeneration of the extramedullary cardiac fibers of the vagus nerves.
6. The existence of bradycardia in a case with bilateral vagus degeneration proves the muscular origin of bradycardia in such a case as the inhibitory influence of the vagi then must be absent.
7. The bradycardia is the fundamental feature of the Adams-Stokes syndrome. The nervous symptoms vary largely, according to the susceptibility of the nervous centers to the circulatory disturbance induced by the bradycardia.

2. **Poliomyelitis.**—Stern's article will be reviewed when concluded.

3. **Listerism.**—Towne gives a résumé of the history of aseptic and antiseptic surgery, showing that the scientific basis of Lister's method has never been successfully attacked, and that the decrease of mortality since its use has placed surgery almost at the head of the modern sciences.

4. **Tubercular Glands of the Neck.**—Sheldon's article is largely an anatomic one showing the conditions to be met in operating for tubercular glands. He thinks that the successful and complete removal is a necessity; partial operations in his practice have been followed by relapses. He reports three cases of death following operations for tuberculous glands of the right side of the neck, and considers them possibly due to the introduction of post-operative debris into the right lymphatic duct. Consequently, he no longer disregards this vessel, but clamps and ligatures the base of the mass of tissue removed from the subclavian triangle in his operations. For details the paper itself should be referred to.

5. **Regicides.**—Spitzka argues that we are not to consider the regicide as necessarily degenerate or insane. He points out that in many, if not in most cases, they have had rational incitation to their act, and their surroundings and associates have been such as to encourage it.

6. **Hay Fever.**—The theory of hay fever held by Stowell is that it is a nervous trouble not due to nasal irritation, but more especially to the actinic solar rays. He has, therefore, utilized smoked glasses for the early form of hay fever in his own case, and finds decided relief from their use. In one or two other persons there were somewhat similar results. He would be glad to have further trials of this method.

Medical Record, New York.

September 5.

9 *Acute Bulbar Paralysis Due to Hemorrhage and Softening of the Pons and Medulla; with Report of Cases and Autopsies. Charles L. Dana.
10 Abscess of the Left Temporosphenoidal Lobe of Otitic Origin; Operation; Recovery. E. Gruening.
11 *The Rational Treatment for Mouth Breathing. W. H. Fitzgerald.
12 *The Internal Administration of Methylene Blue as an Aid in the Diagnosis of Urethroperineal Fistula. Richard Lightburn Sutton.
13 A Possible Case of Infant Poisoning as a Result of Abnormal Mental and Physical Condition in the Mother. Chester J. Stedman.
14 A Case of Smallpox in the Fetus. J. H. Franklin.

9. **Bulbar and Pontine Paralysis and Softening.**—Dana's article is a very elaborate one, giving the anatomy, etiology, pathology, clinical symptoms, etc., of the conditions of hemorrhage and softening of the pons and medulla causing acute bulbar paralysis. He concludes with rather elaborate reports of personal observations of cases and a bibliography.

11. **Mouth Breathing.**—The method suggested by Fitzgerald for the treatment of mouth breathing is, first, to restore the nose as nearly to the normal conditions as possible, and then insist on the patient using it. He says so long as local applications, sprays, douches and solution treatment are relied on we shall fail. What the nose wants is air and not water or sprays. He treats these cases by regular exercise, using the mouth guard at night for a few weeks. The form of guard he has found best is a small strip of adhesive plaster worn vertically across the center of the mouth. He thinks treatment should be commenced in early infancy. Normal breathing will help to bring about normal development. Without it such development can not be obtained.

12. **Methylene Blue in Diagnosis.**—Sutton reports a case in which methylene blue given by the mouth was effective in diagnosis of the urethral connection of a perineal abscess which could not otherwise be detected. He thinks the method is to be recommended in such cases where the canal is too tortuous for probing or where the genito-urinary tract is sus-

pected, on account of its simplicity, reliability and freedom from pain.

Boston Medical and Surgical Journal.

September 3.

15 *The Resistance of Tissues as a Factor in the Manual Reduction of Congenital Hip Dislocation. E. H. Bradford.
16 *Privileged Medical Communications. David W. Cheever.
17 *The Workings of the New York Law. Walter Soren.
18 *Privileged Communications to Physicians. Frederick J. Stimson.

15. **Congenital Hip Dislocation.**—Bradford holds from his study of the subject that the resistance offered by the capsule in congenital hip dislocation is not more important than that offered by the muscles. The chief resistance to forcible abduction is from the strong tendon of the adductor magnus. The resistance to pulling down the head comes from the hamstring group and the long tendon of the adductor magnus and ilio-tibial band. These resistances may be overcome by small incisions at a distance from the hip. In the lighter cases manual manipulation is sufficient. In resistant cases mechanical force, which pulls on and abducts the limb, arranged so as to also directly act on the capsule, is of assistance. Where the tendon of the adductor magnus is so strong that excessive force is needed in stretching, it seems to him advisable to divide the chief resisting tissues rather than to incur the danger of severely bruising the tissues by the force used. Division of the tendon can be done either before the operation of forcible correction or at the same time.

16. **Privileged Communications.**—Cheever rather advocates the New York law or some modification of it. He suggests that it should be considered unprofessional for the physician to divulge anything confided to him by his patients unless the patients consent or it is a case of crime. In all other cases the confidences should be considered privileged communications, and if a physician declines he should be protected. If he consents to testify he should go before the judge in private.

17. **Privileged Communications.**—Soren describes the New York law and the amendments that have been made. The obvious lesson to be drawn from its working, he says, is that any new legislation on the subject of privileged communications would have to be contained in eight or nine separate sections in order to take advantage of the points that have made the amendments to the New York law advisable. It would also be well to avoid, if possible, language giving the court such entire freedom of construction. The question in regard to a medical privilege law would be whether more injustice would be caused by it than would otherwise be the case. The fact, however, that they are still amending the New York law stands something in its favor.

18. **Privileged Communications.**—Stimson maintains that the common law practice is really the best. He sees no reason why a physician's privilege should be used to protect a crime. In instances of actions for damages for personal injury by the patients he sees no reason why the latter should necessarily be protected. If the injury is trivial and the person injured is trying to get up a fraudulent claim, there does not seem to be much injustice in making him confide in the physician at his own risk. In will cases there certainly should be no privilege, he thinks, and it is well known that the New York statute works an injustice on life insurance companies in its present arrangement. In suits between the physician and patient it is not in the interest of the physician, at least, to have the privilege maintained. There is a great class of cases, likely more and more to get into the courts, in matters of marriage, divorce or sometimes wills, where the physical condition and the just or temperate life of some person is concerned. No statute, he thinks, can be drawn which can be safely applied to all these cases, and the absolute exclusion of the physician's testimony would be unwise. It is, therefore, better, he says, to leave the matter to the common law as done at present in Massachusetts and some other states.

Medical News, New York.

September 5.

19 *The Reduction in the Infant Mortality in the City of New York and the Agencies Which Have Been Instrumental in Brining It About. Rowland G. Freeman.
20 *Neglected Prophylactic Measures Against Diseases of the Respiratory Tract. D. H. Bergey.
21 Puerperal Insanity. J. Will Palmer.
22 The Adaptability of Western Texas Climate for the Treatment of Consumptives. C. H. Wilkinson.
23 Perineal Prostatectomy without Opening Urethra or Bladder; Unsatisfactory Result; Subsequent Perineal Cauterization of en Collarette Narrowing of Bladder Orifice; Recovery. Joseph R. Eastman.
24 Mastoid Disease and Meningitis. Seymour Oppenheimer.

19. **Infant Mortality.**—The following is the summary offered by Freeman of his discussion of infant mortality and its reduction in New York City:

> 1. The infant mortality of all countries is shockingly high, and this is shown to be unnecessary by the fact that infants that are well cared for show a very low mortality.
>
> 2. The influences that contribute to the high mortality are defective feeding, the active cause, and heat and humidity and bad surroundings as contributory causes.
>
> 3. There has been a marked decline in infant mortality during the last ten years in the United States, and especially in New York City, due, for the most part, to the decline in mortality from summer diarrhea.
>
> 4. This striking decline in infant mortality is due to many agencies. The general adoption of pasteurization and sterilization of milk for infant feeding is by far the most important of these and applies to New York City and the whole of the United States. Other agencies in New York City are the improved city administration, the milk inspection of the department of health, the Straus Milk Charity, the fresh air work of St. John's Guild and similar charities, cleaner streets and asphalt pavements, the new small parks, playgrounds and recreation piers, the improved tenements and the use of diphtheria antitoxin.

20. **Respiratory Diseases.**—Bergey calls attention to certain evils and neglected prophylactic measures, especially in industrial pursuits where exposure to dust is required. We should give more attention to the value of pure air, and secure for this class of workingmen shorter working hours and less exposure, encouraging them to more outdoor exercise. The condition of city streets is another matter of importance, and undoubtedly favors the general dissemination of specific microorganisms and also lowers the vitality of the respiratory mucosa. He hopes that we will have more efficient street cleaning and transportation lines placed either underneath or above the streets, and the employment of draft horses substituted by other means. The second point to which he calls attention is the deficiency of ventilation in the public schools and their overcrowded condition.

American Medicine, Philadelphia.

September 5.

25 *A Study of Uncinariasis in Porto Rico. (To be concluded.) Bailey K. Ashford and W. W. King.
26 *The Significance of the Convulsion in Idiopathic Epilepsy. J. W. Wherry.
27 *The Abuse of Inflation and Massage of the Middle Ear. Emil Amberg.
28 A Case of Infectious Dermatitis in Chronic Morphinism, Accompanied by an [illegible] Resembling M. Gonorrhea. Palmer [illegible] ierry.
29 *The Antiseptic Qualities of Coffee. W. H. Crane and Alfred Friedlander.
30 *On the Toxicity of Methyl Alcohol in Extracts and Medicines. R. H. Main.
31 Historic Notes on the Laws Governing Civil Malpractice in the Ancient Times and the Middle Ages. Charles G. Cumston.

25. **Uncinariasis in Porto Rico.**—According to Ashford and King the most favorable conditions exist in Porto Rico for the growth and spread of uncinariasis, uncommonly fine climate, water-soaked soil, perfect culture media, topography favorable to the spread of larvæ, dense shade, density of population, agricultural pursuits, bad sanitation and habits. The authors lay much stress on the importance of eosinophilia as a diagnostic and prognostic point. The disorder is at some period of its course marked by this condition. High eosinophilia is to be looked for in recent cases where the blood regeneration is still active. In chronic cases, where the anemia is profound, it is apt to be low, and to rise after treatment, if the prognosis is good. A fall in the number of eosinophiles, however, is a bad symptom. They notice the symptoms at length and consider the course of the disease, when uninterfered with, to be progressively downward.

26. **Epilepsy.**—Wherry holds that the convulsion in epilepsy is a salutary process and that without it the condition would be much more serious. It is a conservator of life, he says, standing between alarming autointoxication and possible

death, and points the way in which the epileptic can secure relief. He does not attempt to stop the convulsions, and the use of bromids, he thinks, for this purpose is a mistake.

27. **Ear Massage.**—Amberg holds that massage and ear inflation are overdone, and insists on the importance of the use of Siegle's pneumatic ear speculum for diagnostic purposes. The treatment should be continuously controlled by hearing tests, and any local treatment, if injurious, naturally should be absolutely prohibited.

29. **Coffee.**—The antiseptic qualities of coffee are noticed by Crane and Friedlander, who have experimented on its bacteriocidal properties. They find that roasted coffee is a decidedly active agent in the destruction of germs, including some of the more serious and important ones. Just how it acts they do not venture to say. They find it can not be due to caffein, as that had very little effect in retarding putrefaction, and tea infusions have not this property. There is no reason to suppose that the oil abstracted by Erdman and Bernheimer has any such effect, and caffetannic acid is abundant in green coffee, which is not effective. The suggestion is made that the antiseptic qualities may be partially due to an aldehyd, but the final solution of the question must wait for a more definite knowledge of the changes induced by roasting the substance.

30. **Methyl Alcohol.**—This is, in substance, the same article as that noticed in The Journal of September 12, ¶52, p. 686.

Cincinnati Lancet-Clinic.

September 5.

32 Timeliness in Abdominal Surgery. Hal C. Wyman.
33 Surgery of the Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued.) IV, Surgery of the Spleen. (Bibliography.) B. Merrill Ricketts.

University of Pennsylvania Medical Bulletin, Philadelphia.

July-August.

34 On the Plurality of Cytolysins in Normal Blood Serum. Simon Flexner and Hideyo Noguchi.
35 On the Plurality of Cytolysins in Snake Venom. Simon Flexner and Hideyo Noguchi.
36 *The Types of B. Dysenteriæ (Shiga) in Relation to Bacteriolysis and Serum Therapy. An Experimental Study. Frederick P. Gay.
37 *Acute Dysentery Associated with the Two Types of Bacillus Dysenteriæ (Shiga). Frederick P. Gay and C. W. Duval.
38 Acute Ulcerative Endocarditis Caused by the Meningococcus (Weichselbaum). Louis M. Warfield.
39 The Effects of Venom on the Blood Corpuscles of Cold-blooded Animals. Hideyo Noguchi.
40 A Note on Autolysis in Lobar and Unresolved Pneumonia. Simon Flexner.
41 Primary Sarcoma of the Spleen, with Metastases; Report of a Case. C. H. Bunting.
42 The Multiplicity of the Hemaglutinins, and the Heat Lability of the Complements of Cold-blooded Animals. Hideyo Noguchi.
43 Notes on the Experimental Production of Specific Cytolysins for the Adrenal, Thyroid and Parathyroid Glands of Dogs. J. L. Yates.
44 The Effects of Lymphotoxins and Myelotoxins on the Leucocytes of the Blood and on the Blood-forming Organs. C. H. Bunting.
45 An Experimental Study of Nephrotoxins. Richard M. Pearce.

36. **Dysentery Bacillus.**—The conclusions reached by Gay are that the dysentery bacilli (Shiga) fall into two types according to their cultural and agglutinative reactions. These, however, are not absolute, but relative; they serve to indicate a closely related group of organisms. The bacteriolytic differences serve to distinguish the two types of dysentery bacilli. The relative value of these distinctions is emphasized by the protective power of antidysenteric serum, which is effective, in different doses, for both types of the micro-organism. Human complement is capable of activating antidysenteric serum from the horse. Passive immunity to the dysentery bacillus is of brief, active immunity, of much longer duration in the guinea-pig. The dysentery bacillus vaccines increase in toxicity for a time, at least, and the increase is associated with disintegrative changes in the bacilli.

37. **Dysentery Bacillus.**—Gay and Duval describe cases which seem to have been caused by this organism, which has the characteristics of a group of organisms rather than one single, well-defined species. They think, however, the distinction of the types into the dysentery and pseudodysentery bacillus, as attempted by Kruse, Martini and Lentz, is artificial and unwarranted with our present knowledge.

Journal of Tuberculosis, Asheville, N. C.

July.

46 *Dispensaries for Tuberculosis, with a Description of the Tuberculosis Department of the Boston Dispensary. Edward O. Otis.
47 *Home and Sanatorium Treatment of Tuberculosis. William Porter.
48 *The Importance of the Nerve Centers in Pulmonary Consumption. Thomas J. Mays.

46. **Dispensaries for Tuberculosis.**—The advantages of these institutions and the order of work of the Boston Dispensary are described by Otis. The objects of a tuberculosis dispensary, according to his views, are: Complete investigation of the patient, personally, and his surroundings; the instruction both of the patient and his household in the hygiene of tuberculosis; the free supply to poor patients of pocket and house spittoons; securing entrance into sanatoriums for curable cases and into consumptive hospitals for incurable ones if they can not be properly cared for at their homes, and if neither of these can be secured, the treating of them as well as possible at their homes; aiding poor patients to obtain suitable food and other necessary articles; affording an opportunity to physicians to send their poor patients for diagnosis when desired, as well as advice and assistance in treatment. Lastly, he mentions the opportunity for scientific study and investigation and for clinical instruction of physicians and students in regard to this condition. The equipment should be a suitable waiting room; a receiving or consulting room where histories are taken, together with pulse, temperature, respiration and weight; several small examining rooms, a small laboratory for sputum examination, etc.; a dark room for laryngoscopic work, and possibly an *x*-ray room. The rooms should all be well ventilated and periodically disinfected. There should be a staff of four chief physicians, each serving three months, with plenty of assistants.

47. **The Home and Sanatorium Treatment of Tuberculosis.**—Porter describes the proper methods of care for patients at home and in the sanatorium, the education of the public, necessity of proper ventilation, rest, exercise, etc., instruction as to clothing, hydrotherapy, dietetic treatment, etc. He remarks that the results of what has already been done, especially in Germany and in some sanatoriums of this country, are most encouraging.

48. **Nerve Centers in Consumption.**—Mays claims that the respiratory organs are biologically the most immature and most predisposed to diseases of all the viscera, and that degeneration or imperfection of the vagi or their nuclei aids this tendency. He remarks in support of his views that pulmonary consumption is much more frequent among the insane and mentally defective than in other persons, and that the increase of insanity among the negroes since the strain on their nervous system following the abolition of slavery is also an evidence of their correctness.

Physician and Surgeon, Detroit and Ann Arbor.

June.

49 *The Treatment of Hyperacidity of the Stomach Contents, with Special Reference to the Carbohydrate or Meat-free Diet. David Murray Cowie.
50 *Fibromata as Complications of Pregnancy. Reuben Peterson.
51 A Daily Study of Foods, Producing or Not Producing Casts, Fatty Epithelia and Albumin in Urine. (Continued.) Ephraim Cutter.

49. **Hyperchlorhydria.**—The advantages of a carbohydrate diet are noted by Cowie, who points out the stimulating action of a more proteid diet on the stomach secretion. He would add to it a certain amount of fats, and especially the use of milk between meals. The medical treatment is limited solely to the use of alkalies, though belladonna and opium have been advocated to reduce the activity of the glands. Stomach washings should be dispensed with as a rule in cases of normal or hypermotility. It is well to reduce the number of lavages as much as possible, though where there are signs of retention or atony lavage should be carried out systematically. Too much alkali in solution should be avoided and only be used when the stomach has been found to be acid. His practice does not give the theoretical results to be expected from diastase preparations. Attention to mastication and the use of dry foods will thoroughly obviate the necessity for these

substances. Constipation should be looked after and peptic ulcer be considered before instituting too radical measures.

50. **Fibromata.**—The dangers of these growths in pregnancy are treated by Peterson, who considers pressure symptoms a more important indication for interference than the size or position of the fibromata. The number, size and position will determine the exact nature of the operation. First, the abdomen is opened, and if there is a single growth and it can be removed easily, myomectomy may be performed and labor allowed to continue by the natural channels. This will be exceptional, however. Usually the choice would be between a cesarean section and supervaginal or panhysterectomy.

Indiana Medical Journal, Indianapolis.

August.

52 *Spastic Contraction of the Intestinal Muscularis as an Element in Intestinal Obstruction. Hugo O. Pantzer.
53 Deaf-mutism. John G. Wishard.
54 *The Rational Treatment of Tetanus. Edward J. McOscar.
55 Gunshot Wound of Abdomen, wih Fourteen Perforations of the Intestine; Operation; Recovery. Wilbur O. Jenkins.
56 A Case of Intestinal Perforation from Gunshot; Operation; Recovery. M. G. Moore.

52. **Intestinal Spasm.**—Pantzer reports four cases of spasmodic constriction of the intestines, 3 of them associated with gallstones and 1 with a suspicion of syphilis. In 1 case there was a perforation of the combined walls of the gall bladder and colon with a stone 5⅛ inches in diameter presenting at the opening. The perforation was closed, the gall bladder emptied of several gallstones and complete relief obtained. The other 2 gallstone cases ended fatally. He discusses the subject generally and the literature to some extent.

54. **Tetanus.**—The rational treatment of tetanus here advocated consists in venesection followed by the injection of normal saline solution. McOscar refers to a case reported previously thus treated, though antitetanic serum was also employed. The result was recovery, though the case was an acute one. He thinks that bleeding and subsequent flushing with normal salt solution had much to do with the good results. The treatment for tetanus, he says, should be first prophylactic by early and free incision and thorough cleansing of every suspicious wound. If the culture shows the tetanus bacillus a liberal immunizing quantity of antitetanic serum should be administered subdurally without waiting for symptoms. When the disease has declared itself the patient should be bled as freely as his condition will admit, followed by generous intravenous injections of normal saline, repeated at sufficient intervals, which will be determined by the rapidity of elimination of the kidneys. After the abstraction of blood the antitetanic serum should be administered in large doses hypodemically.

Annals of Otology, Rhinology and Laryngology, St. Louis.

June.

57 *Is Atrophic Rhinitis Always Autochthonous? The Necessity of Establishing an Exact Diagnosis in Order to Determine the Treatment. W. Freudenthal.
58 An Unusual Case of Frontal Sinusitis. Absence of the Septum. C. G. Coakley.
59 Etiology, Pathology and Symptomatology of Chronic Suppurative Otitis. Charles W. Richardson.
60 The Teaching of Otology to the Undergraduate Medical Student. Alex. Randall.
61 A Few Remarks on Some Everyday Ear Cases. J. E. Sheppard.
62 A Case of Tubercular Laryngeal Stenosis Treated by Tracheotomy. J. Price-Brown.
63 *Mastoid Disease and Meningitis. Seymour Oppenheimer.
64 Some Unusual Mastoid Cases. H. Bert Ellis.
65 Thrombus of the Sigmoid Sinus; Report of Two Cases, Presenting Some Symptoms Differing from Those Usually Found in This Disease. James F. McKernon.
66 Report of a Case of Bilateral Abscess of the Septum with Well-marked Symptoms of Septicemia, and Report of a Case of Epiglottic Abscess with Secondary Involvement of the Cervical Glands. William L. Culbert.
67 A Contribution to Our Knowledge of the Causes of Left Recurrent Laryngeal Paralysis. O. Joachim..
68 A Demonstration of Some Experiments on the Nature and Specific Treatment of Hay Fever. Felix Simon.
69 Address, American Laryngological, Rhinological and Otological Society. L. C. Cline.
70 Case of Removal of Cochlea and Semicircular Canals; Recovery. R. L. Culbertson.
71 A Mastoid and Auricle Retractor. Frederick L. Jack.

57. **Atrophic Rhinitis.**—Freudenthal considers that ozena is an atrophy of the nasal interior conditioned by atmospheric influences—xerasia. The bones of the turbinated bodies appear to be early affected, and the effects of lack of humidity in the air are apparent in all parts. To convert this atrophy into ozena the invasion of a bacillus similar to Friedländer's pneumobacillus is necessary. This usually occurs at an early period of life, perhaps caused in some cases by direct transmission from the vulva. Accessory sinus disease often appears as secondary to the ozena. After all that has been said ozena is to be considered as a genuine and autochthonous disease, resulting from atrophy of the nasal interior.

63.—See also title 24, above.

Journal of Cutaneous Diseases, New York.

August.

72 *Some Observations on the Use of Roentgen Rays in Dermatology. Henry W. Stelwagon.
73 *The Rationale and the Indications for the Therapeutic Use of Roentgen Rays. William A. Pusey.
74 **The Roentgen Rays in Dermatology. Edward B. Bronson.*

72. **The Roentgen Rays.**—Stelwagon discusses the values of the coil and static machine as a source of Roentgen rays. He prefers the coil if the electric current is handy or the recharging of the storage battery is feasible. It is more steady and works better in all kinds of weather. For other purposes besides *x*-ray work or where electric currents or the recharging of batteries is not feasible, the static machine should be preferred. A coil with a capacity of a six-inch spark and a static machine giving a good eight-inch spark, will do excellent work. The vacuum is another factor. He says that a moderately low vacuum, equal to a spark gap of about 2 inches, has been what he has used and has seemed to him satisfactory. For protectors he has devised a wooden screen fifteen inches in diameter, one side covered with lead foil and arranged with a head rest, acting both as a protecting screen and a tube holder. When the distance of the tube from the patient is more than five or six inches, a funnel can be attached to the screen with rubber bands and the projecting aperture brought directly over the part to be treated. For the protection of the hands, which is important, he has come to use double mittens, one much larger than the other, the smaller pair enveloped in tin foil, which can be renewed from time to time. The scalp may require attention and protection, and he has noticed that some of his patients have complained of slight dizziness or headache, and he thinks he has suffered so himself. He does not use the *x*-ray treatment for everything, and except in epithelioma, lupus vulgaris, cutaneous tuberculosis, lupus erythematosus, etc., he has employed it only where the cases have proven rebellious to the ordinary methods. The most favorable cases in his experience are those of rodent ulcer occurring in the neighborhood of the eyes. He does not believe in pushing the treatment to actual destructive action, but he thinks that few cases will show much progress unless the *x*-ray affects to a degree of producing a slight flush, usually an extremely slight *x*-ray erythema. He always begins with the tube about 10 or 12 inches with an exposure of five minutes, and gives the treatment, as a rule, twice weekly for two weeks. Then, if no reaction occurs, he speaks of prolonging it fifteen or twenty minutes. A moderate grade of dermatitis may be excited, causing a discontinuance. He has employed the *x*-ray treatment in acne, besides the diseases mentioned, and found it useful. In eczema his moderate experience has led him to think something of its value. In keratosis of the palms and soles he thinks it promises much, and he has had it produce a disappearance of the eruption in psoriasis. Local hyperidrosis is another condition in which he has found it of value. He considers it of first importance in epithelioma, and that it has a wide range otherwise. In eczema, psoriasis and other inoffensive dermatoses he would reserve it for cases that prove intractable to treatment otherwise.

73. **The X-Ray.**—Pusey describes the action of the *x*-ray on the skin as it has been determined. He believes that it acts primarily on the tissue cells, later on the blood vessels. The key to the explanation of the use of the *x*-rays in malignant disease is that it has a quicker action on pathologic tissues than on normal ones. He reviews the various disorders in which he found it of value, including hypertrichosis, sycosis,

comedo, acne, rosacea, hyperidrosis, as well as eczema, lupus, lichen planus, psoriasis and other disorders where the absorption of inflammatory products is desired. His experience with eczema has been favorable as in the case of other workers. The anodyne effects of the x-rays are also of value, especially in itching troubles. In favus and tinea tonsurans he has not established its permanent value. It is possible that it might be of use in causing exfoliation of the nail substance, and where it is desired to cause atrophy or decrease in the functional activity of the sebaceous glands.

74. X-Ray Burns.—Bronson remarks that while our knowledge of what produces the effect is vague, there is no obvious reason why there should not be a large margin of individual susceptibility. Low tubes seem to be more dangerous in this respect than the high tubes, which are presumed to be more penetrating and suitable for deeply-seated troubles. He discusses the distance of exposure and mode of application. He thinks the standard is 10 minutes at eight inches for the first exposure. He gradually increases this later. No measure, he thinks, requires greater circumspection in its employment or a nicer adjustment of details.

St. Paul Medical Journal.

August.

75 The Relationship Between Diseases of the Nose and Throat and General Diseases. Jacob E. Schadle.
76 Dysentery. G. A. Skinner.
77 *Some Causes of Failure of Operation to Cure Gallstone Disease. William J. Mayo.
78 Some Therapeutic Uses of the X-Ray. W. P. Spring.
79 Kraepelin's Classification of Insanity as Presented by Defendorf. Dwight S. Moore.
80 Puerperal Sepsis from Retained Lochia. C. L. Brimi.
81 Acute Intestinal Obstruction. H. J. O'Brien.
82 Acute Chorea. Arthur W. Dunning.

77. Gallstone Disease.—Mayo remarks on the success of gall-bladder surgery. In 582 operations he has had but 17, or 3 per cent., that required a secondary operation. It is possible, however, that others may have operated on some of his cases, so this figure is not absolute. Experience has taught him how to get over the defects of his earlier work and avoid the causes which lead to subsequent troubles. He remarks in this connection that a few patients who have had cholecystostomy performed will have a colic or two and transient jaundice within the first month or two after the operation, but usually these do not recur. They are probably due to the non-emptying of the crippled gall bladder with sufficient promptness. Unless there is more than a single spell of pain after closure of the fistula a secondary operation may not be required. The most common cause of secondary symptoms is incomplete removal of stones. This, however, is avoidable with sufficient care. Stones in the cystic duct may escape attention, hence the importance of great care in its exploration. In such cases if the stone completely obstructs the duct he clamps it below the obstruction and cuts it off and then performs cholecystectomy from below upward. It may be done almost without cutting by simple traction. It is important to explore the ducts with the fingers before opening the gall bladder in every case, as stones are sometimes overlooked in the common duct where they may lie quiescent for years. One cause of failure from cholecystostomy is from secondary obstruction of the cystic duct, possibly eventuating in a mucous fistula or repeated attacks of colic, hence the advisability of generally excising the gall bladder whenever the cystic duct is involved. In this way he has in his later practice eliminated this most common cause of secondary trouble. In septic cases long-continued drainage is necessary; severe symptoms may follow too early closing of the fistula. Cancer may be said to be secondary to stone formation, and may occur after operation or, if present, be mistaken for inflammatory conditions. All thick-walled gall bladders should be looked on with suspicion. As they are functionally useless cholecystectomy is better than cholecystostomy. Chronic pancreatitis may exist at the time of operation and require long-continued drainage. The condition of the pancreas should be observed at the same time as that of the ducts. If disease is present there is the choice of cholecystenterostomy with the Murphy button in addition to removing the stone, or of draining for a long time. In the one uncomplicated case in his experience which required a secondary operation, the gall bladder was very large and the fistula did not close. On dissecting out the gall bladder it was found that, by low attachment to the abdominal incision it had formed a channel in which in certain positions of the body bile would gravitate outward. After cholecystostomy the gall bladder should be attached as high up in the incision as convenient. Persistent biliary fistula usually means obstruction of the common duct. He holds that every one understands the importance of not attaching the gall bladder to the skin. In earlier days persistent biliary fistula was usually due to the mucocutaneous suture, the evils of which he does not need to point out. The turning in of the margins of the incision in the gall bladder and the tying of a purse-string suture closely about the drainage tube, as in Kader's gastrostomy, hastens the healing of the fistula. Two possible or rather common causes of failure to effect a perfect cure that can not always be avoided are post-operative adhesions. Those to the stomach and duodenum are the most common, and may require secondary separation with the use of Cargile's membrane; and hernia, which is not usually troublesome. It may follow a long incision in obese people. While the adhesions usually relieve themselves by stretching, he does not allow the gauze drains to come in contact with the stomach and duodenum on account of their possible development, but interposes a piece of rubber tissue and leaves it from six to eight days until the adherent films surrounding the drains become organized. To avoid hernia, he makes a secondary opening outside the working incision in cases where it is at all likely to occur, close to the ribs, and through this the drainage matter may be brought out. This enables us to carefully close the full length of the original incision. The necessity of this is increased if the opening has been extended downward to remove the appendix.

Annals of Gynecology and Pediatry.

August.

83 *The Toilet of the Peritoneum in Appendicitis. Stephen H. Weeks.
84 *Toilet of the Peritoneum in Gunshot Wounds of the Stomach and Intestines. George Tully Vaughan.
85 *Simultaneous Catheterization of Both Ureters. Its Advantages. Technic with New Instrument. S. L. Elsner.
86 *Remarks on Cesarean Section for Placenta Previa, with Special Reference to the Life of the Child. Francis D. Donoghue.

83. Appendicitis.—No one method is suitable in all cases, Weeks remarks. If there is no pus formed drainage is not required. If a circumscribed abscess exists care should be taken not to infect the general peritoneal cavity by forcible irrigation which may extend the infection. The pus cavities should be cleansed with gauze pads wet with sterile salt solution or sometimes with peroxid of hydrogen diluted with equal parts of sterile water. In such cases the appendix can generally be found and should be removed, and the wound and abscess cavity should be packed with sterile gauze. Where the wall of the abscess is firmly adherent to the anterior abdominal wall and can be opened without opening into the non-infected abdominal cavity, the point of adhesion should be carefully determined and the abscess opened at this point. Concretions should be looked for, as they may lead to sinuses, the abscess cavity evacuated and cleansed with gauze pads or irrigation and the whole cavity packed with gauze. Great care should be used not to break down the abscess wall at any point. Where there is no protecting wall of adhesions and the products of a septic peritonitis have flooded the abdominal and pelvic cavities, thorough irrigation is required, perhaps several times repeated, and drainage.

84. Gunshot Wounds.—Vaughan classifies gunshot wounds into two classes—with or without peritonitis. In the first class, if there is no extravasation of the visceral contents, neither irrigation or drainage is required, but if there is extravasation of the visceral contents, thorough cleansing of the peritoneal cavity is necessary and, unless the operator is satisfied that the cleansing is perfect, drainage should be used from the most dependent part—in the female in the vagina and in the male perhaps by tapping the rectovesical peritoneal pouch by an opening into the perineum between the rectum

Perlsucht. In all, tubercle bacilli from 39 different sources were examined, including 16 children. With 19 there was not the slightest evidence of pathogenicity; with 9 a local focus was induced, with no tendency to dissemination. With 4, all derived from children, a general infection resulted which ran a course similar to mild bovine tuberculosis infection. In only 2 of the 4 had the death of the child been due to the tuberculous process. Orth refers to his similar experiments, which resulted in general infection of 2 calves out of 5 inoculated with human tubercle bacilli. He remarks that it is for Koch now to explain why his experiments all resulted negatively when others always obtain a certain proportion of positive results.

58. **Bacteria of Whooping Cough.**—Arnheim reiterates his claims made three years ago in regard to the specificity of the bacteria isolated by him from the throat of children with pertussis. In 8 cadavers he found the laryngeal and pharyngeal mucosa inflamed with hemorrhagic points and foci of these bacteria. He did not find any specific substance toxic for the nerves.

59. **Gall-Bladder Colic Without Gallstones.**—In Krukenberg's 2 cases no stones were found, but the gall bladder seemed to be abnormally movable.

Centralblatt f. Bakteriologie, etc., Jena.

61 (No. 9.) Beitrag zur Kenntnis der Kapsel-Bacillen. Milan Sachs.
62 Bakteriologische Untersuchungen bösartigen Geschwülste (malignant tumors). R. Alessandri (Rome).
63 Study of Yeasts Pathogenic for Animals. E. Cohn (Halle).—Ueber die Klein'schen tierpatogene Hefe.
64 *Bactericidal Properties of Bone Marrow and Study of Etiology of Osteomyelitis. A. Hencke (St. Petersburg).—Die bakt. Eigenschaften, etc.
65 *Immunization of Guinea-pigs Against Tuberculosis. E. Levy (Strasburg).—Ueber die Möglichkeit Meerschweinchen gegen Tub. zu immunisieren.
66 Amount of Cholera-Immune Bodies Contained in Separate Albuminoid Elements of the Serum. A. Wolff.—Ueber den Gehalt der einzelnen Eiweissfraktionen des Serums (Globulin, Euglobulin, Albumen, etc.) an Choleraimmunkörpern.
67 Vergleichende Untersuchungen über Anti-Streptokokken-Sera, nebst einigen Bemerkungen über die Kultur und Virulenz der Streptokokken. P. Sommerfeld (Vienna).
68 Agglutinating Properties of Bile. A. Cantani (Naples).—Ueber die agglut. Eigenschaft der Galle.
69 Eine Typhus-Anreicherungs-Methode. E. Allschuler (Strasburg).
70 Determination of Typhoid Germs in Water. C. Hagemann.—Zum Nachweis von Typhuserregern im Wasser.
71 Technic of Freezing Mixtures for Preservation and Transportation of Samples of Water for Bacteriologic Examination. E. Bertarelli (Turin).

64. **Bactericidal Properties of Bone Marrow.**—Hencke proclaims that the bone marrow has very pronounced bactericidal power and frees itself of bacteria more rapidly and more effectually than the internal organs. He also states that he found a bacillus in 5 cases of spontaneous osteomyelitis, which invariably reproduced the typical affection in rabbits after intravenous injection without trauma.

65. **Vaccination of Guinea-Pigs Against Tuberculosis.**—Levy found that virulent bacilli of human tuberculosis became avirulent when kept for forty-eight hours in an 80 per cent. sterilized solution of glycerin, at a temperature of 37 C. Injected into guinea-pigs, these bacilli caused the formation of an abscess, but this soon healed. A series of five intraperitoneal injections of these glycerinated bacilli practically vaccinates them against tuberculosis infection. Injection afterward into the axilla of an otherwise fatal dose of virulent human tubercle bacilli, fails to induce more than a mild, rapidly-healing lesion. Not a trace of general tuberculosis could be discovered in the animals when dissected later. He made these injections into the axilla under conditions approximating as closely as possible those that prevail in human tuberculous infection.

Deutsche Zeitschrift f. Chirurgie, Berlin.

Last indexed page 290.

72 (LXIX, 1.) Zur Kenntnis der Perityphlitis. Neuhaus (König's clinic, Berlin).
73 Zur Lehre von der Bauch-Aktinomykose (of abdomen). M. Zondeck (Berlin). One case.
74 Invagination in der Esophagus der vorderen Magenwand (of anterior wall of stomach). Enderlen. One case.
75 *Three Cases of Suture of the Heart. Wolff (Barth's service, Dantzic).—3 Fälle von Herznaht wegen Herzverletzung.
76 Volvulus im Säuglingsalter (in infancy). Kredel.
77 *Drainage of Pelvic Abscesses Through Sciatic Foramen. M. Schmidt.—Zur Beckenabszessdrainage durch das Foramen ischiadicum.

75. **Suture of Heart.**—Wolff *states that* 39 *cases* have now been recorded of suture of the heart and the results indicate that suspicion of a stab wound of the organ imposes operative intervention, even in the absence of vital indications, as a prophylactic measure. On the other hand, wounds from firearms may be treated expectantly. In the former case the pleura has almost invariably been opened, and, therefore, it is not necessary to operate extrapleurally. The pericardium should be sutured, the tampon used only when the wound is infected. The button suture has proved most effective; the threads tied during the diastole. The left ventricle is most favorable for an operation of this kind as the patients are not so liable to bleed to death on the spot. The case reported by Pagenstecher confirms Bode's experimental research, demonstrating that the nourishment of the heart does not suffer materially after ligature of a coronary artery. Wolff reports 3 cases of suture of the heart, with 2 recoveries, and states that this brings the total on record to 42, with 17, that is, 40.4 per cent. recoveries. Only 1 was a firearm wound. Fischer's statistics showed that only 10 per cent. recovered in the unoperated cases. Wolff adds that intervention may be necessary and successful even in the absence of an external wound as witness a case described in the *Lancet* in 1897. A young man was kicked in the breast at football. Unconsciousness persisted and the heart dulness kept on increasing. The pericardium was incised and found filled with blood, but bleeding from the heart had ceased. After the blood had been drained away the young man was fully restored and was able to join in the game again.

77. **Drainage of Pelvic Abscesses Through Sciatic Foramen.**—Schmidt found that the foramen is easily and conveniently reached through an incision as for a Kocher resection. The results of draining by this route in the 3 cases described showed the feasibility and advantages of the procedure.

Mitteilungen a. d. Grenzgebiete d. Med. u. Chir., Jena.

Last indexed page 216.

78 (XI, No. 4.) *Enlarged Spleen and Hyperglobulia. J. Rosengart (Frankfurt a. M.).—Milztumor und Hyperglobulie.
79 *Ueber Appendicitis obliterans. Knud Faber (Copenhagen).
80 *Respiratory Disturbances in Exophthalmic Goiter; Goiter Asthma and Goiter Death. L. Hofbauer (Vienna).—Typische Athemstorungen bei M. Basedowii: ein Beitrag zur Lehre vom Kropfasthma und Kropftod.
81 Congenital Defects in Abdominal Muscles, etc. E. G. Stumme.—Ueber die symmetrischen Bauchmuskeldefecte und über die Kombination derselben mit anderen Bildungs-Anomalien des Rumpfes.
82 Endo-thoracic Giant Goiter. Hopmann.—Eine seltene Mediastinalgeschwulst.
83 Traumatic Rupture of Heart. Revenstorff.—Ueber traum. Rupturen des Herzens mit bes. Berücksichtigung des Mechanismus ihrer Entstehung.

78. **Spleen Tumor and Hyperglobulia.**—Rosengart describes the case of a man of 41 who had suffered for a long time from oppression in the heart region, dyspnea and vomiting. The blood was thick and dark red, specific gravity 1,072, hemoglobin 190 to 200. There were 10 million reds and 12,000 whites, all apparently of normal composition. The spleen was very much enlarged, and there was a peculiar purplish coloring of the face, hands and visible mucosæ. Venesection relieved the symptoms temporarily, but was abandoned after a few trials for fear it might incite to renewed regeneration of the blood, as it is known sometimes to do in chlorosis and anemia. Treatment with iodin to relieve the circulatory disturbances was supplemented by dieting to "un-iron" the patient, restricting him to sugar, rice, cereals, peas, dates, figs, plums and nuts. After eight months the reds had diminished by 1 million, the hemoglobin had fallen from 200 to 150 and the whites from 12,000 to 10,000. The outline of the spleen was still 30 by 15 cm. Rosengart believes that the syndrome was due to a primary tuberculosis of the spleen, and suggests the possibility that splenectomy might prove as effectual in such cases as in splenic anemia. The hyperglobulia he regards as a secondary reaction on the part of the bone marrow. He has found 6 cases on record of primary tuberculosis of the spleen.

In one it was a pure, primary tuberculosis of the organ; in 3 there was primary tuberculosis of the spleen and secondarily of the liver. In another the diagnosis was not certain, and in the other the details are too meager. Türk has reported a case of ten years' duration in which the hemoglobin when examined was 180 per cent. and the specific gravity 1.070.

79. Appendicitis Obliterans.—Faber states that the microscopic findings in appendices removed on account of chronic inflammation are identical with those discovered casually at autopsies which some regard as the results of senile involution.

80. Respiratory Disturbances in Exophthalmic Goiter.—Hofbauer distinguishes between the primary disturbances and those induced secondarily by mechanical compression of the trachea by the struma—cardial and bronchial asthma or hysteria. The primary are characterized by the shallowness of the respiratory curve, protracted inspiration and expiration, irregularity in the shape and size of the curves, with intervals of pauses in the respiration, more or less complete. There is another form of the primary disturbances characterized by paroxysmal, rapid, deep breathing, likewise with pauses. He attributes both to the functional disturbance of the thyroid gland, which is responsible for the disease, and is inclined to endorse the possibility of combating this morbid secretion of the thyroid with the milk or serum of thyroidectomized animals.

Muenchener Med. Wochenschrift, Munich.

84 (No. 32.) *Significance of Catatonic Phenomena for Prognosis. E. Meyer.—Zur prognostischen Bedeutung der katatonischen Erscheinungen.
85 *Diagnosis of Liver Abscess After Dysentery. Schlayer (Tientsin).—Zur Diagnose des Leberabszesses nach Ruhr.
86 *Zur Kenntnis der Bantischen Krankheit (Banti's disease). Fichtner (Leipsic).
87 *Widal's Reaction in Icterus. F. Köhler.—Die Widalsche Reaktion bei Gelbsucht.
88 *Latest Operative Efforts Directed Against Uterine Cancer. A. Sippel.—Die neueren Operationsbestrebungen gegenüber dem Gebärmutterkrebs.
89 Nochmals die [illegible] i. Grersen.
90 *Importance of [illegible] in Orphan Asylums, etc [illegible] Bedeutung der ärztlichen [illegible] Physiologie, Pathologie und [illegible] ten Alter.
91 *Zur Kasuistik [illegible] (contusion of kidney). C. Bechtold.
92 *Progress in Technic of Roentgen Transillumination. B. Wiesner and F. Dessauer (Aschaffenburg).—Ueber einen Fortschritt in der Technik der Roentgendurchleuchtung.
93 *Hypnosis and the Medical Profession. A. Forel.—Die Hypnose vor der Aerztekammer.
94 (No. 33.) *Zur Prophylaxe und Therapie des Puerperal-Fiebers. H. Fehling (Strasburg).
95 Stab and Bullet Wounds of Abdomen. H. Gebele.—Ueber penetrierende Bauch-Stich- und Schuss-Wunden.
96 Ueber Psychosen unter dem Bilde der reinen primären Inkohärenz. L. W. Weber.
97 *Revival of Isolated Heart. A. Velich (Prague).—Kritische und experimentelle Studien über die Wiederbelebung von tierischen und menschlichen Leichen entnommenen Herzen.
98 Alkoholismus und Bier. G. Keferstein (Göttingen).
99 (No. 34.) *Zur Behandlung der Hematocelen. P. Zweifel (Leipsic).
100 *Adrenalin in Spinal Cocainization. A. Dönitz.—"Kokainisierung des Rückenmarkes" unter Verwendung von Adrenalin.
101 Anwendung von Akoin-Kokain zur Lokal-Anesthesie. W. Krauss (Marburg).
102 Circumscribed Foci of Inflammation in Temporal Bone. C. Biehl.—Streng umschriebene Entzündungsherde im Schlafenbeine.
103 Giant Growth in the Newborn. H. Fuchs.—Ueber Riesenwuchs bei Neugeborenen und über Partus serotinus. (Commenced in No. 33.)
104 Toxin and Antitoxin. P. Ehrlich. (Concluded.)

84. Importance of Catatonic Symptoms for Prognosis.—Meyer believes that catatonic phenomena render the prognosis of a psychosis grave, but not necessarily absolutely bad. In his experience with 46 cases in which they were included in the clinical picture one-fifth to one-fourth of the number recovered their health—by the layman's standard of health—for a number of years. There were hereditary influences at work in about 54 per cent., and most pronounced in the cases with the least favorable outcome.

85. Diagnosis of Liver Abscess After Dysentery.—Schlayer was frequently able to affirm with almost certainty by the hyperleucocytosis the presence of an abscess in the liver. He says that in 11 cases of acute or subacute abscess the leucocytes ranged from 18,000 to 62,000 the days before the operation, averaging 25,000, with a single exception. The lack of hyperleucocytosis was frequently a valuable sign for exclusion of liver abscess in puzzling cases of typhoid or malaria.

86. Banti's Disease.—Fichtner analyzes a case which he had opportunity to observe through several years. A previously healthy young man received a blow in the left stomach region. The pains persisted for weeks, and the spleen became much enlarged. During the following seven years he was debilitated and presented a hypertrophied spleen, severe, rebellious otitis, varying anemia and ascites, with occasional gallstone colic. Both the anemia and ascites retrogressed so much that operative intervention was not advised. The last examination, however, showed 92 per cent. hemoglobin, 4,060,000 reds and 3,458 whites. The spleen had slightly increased in size, but there was no ascites. The case shows that the connection between the spleen tumor and the changes in the blood is not so close as Banti assumes, otherwise the anemia would have been much more intense in comparison with the size of the spleen. The fluctuations in the intensity of the anemia, considered with reference to the constantly progressive increase in the size of the spleen, indicate that the blood changes are not secondary to the spleen affection but must have some other special cause.

87. Widal's Reaction in Case of Icterus.—Köhler's researches detract from the reliability of the Widal test as the reaction was obtained in 12 out of 100 non-typhoid cases. It was particularly marked in liver affections with icterus. Bile gives the reaction, also, but comes more under the head of chemical reactions. Catarrhal icterus may modify the blood serum and induce a positive response to the test, especially when the infection is due to the colon bacillus. Puerperal fever, sepsis, coli abscesses, intestinal catarrh and coli metastases are all liable to lead to errors in diagnosis from this cause. Agglutination may occur, therefore, not only with typhoid, but also with liver affections, accompanied by stagnation of bile and the passage of bile into the blood, and also when the organism is under the action of certain chemicals, or of the colon bacillus, and, possibly, of other bacteria.

88. Operative Treatment of Uterine Cancer.—Sippel thinks that the development of operative technic has reduced the dangers from abdominal section to such a low point that it now ranks with vaginal intervention. He restricts vaginal hysterectomy to cases in which the cancer is in the corpus, if not too far advanced, and also cases of incipient carcinoma of the portio.

90. Medical Oversight of Orphan Asylums, Etc.—Siegert refers to the fact that Strasburg stands at the head of German cities in respect to its care of the children with its numerous vacation colonies, children's hospitals, etc. He describes the workings of the official medical inspection of all children in any way the wards of the community. All orphans and other dependents under 2 years of age must be brought to the dispensary appointed for inspection at intervals of one to eight weeks as directed. The child is examined, weighed and the details recorded in regard to its food, growth, frequency of meals, the influence of the maternal constitution on the child, the prodrome and symptoms of disease, its development, the particulars of teething and the disturbances connected therewith, the development of the static functions and other particulars. These examinations of such large numbers of children, both the sick and the well, at stated periods, and the careful records kept of each case can not fail to throw light on some still disputed questions.

91. Subcutaneous Injuries of Kidney.—Bechtold reports a favorable termination in each of the three cases he describes. Hematuria was the prominent symptom. In 2 the traumatism affected both the front and back, and the injury was probably due to hydraulic pressure. One of the patients was 85. The complete transient retention of urine was probably the result of reflex action from the injured kidney on the other one.

92. Improved Technic of Radioscopy.—Among the points mentioned are the use of a "giant tube" and of a stand like an ordinary screen, only more solid. A sheet of lead slides vertically up and down in the frame of this screen, with an adjustable diaphragm in the center. A sheet of ground glass

118. Hot-Air Treatment of Gynecologic Affections.—The efficacy of dry heat in reducing pain and promoting absorption has been established to Burger's satisfaction from his experience with a number of cases treated by electric baths or application of superheated air. In 8 out of 12 cases of chronic perimetritis of six months' to nine years' standing the patients were soon relieved of the pains in the sacral and lumbar region and felt better generally. In 5 of these improved cases the palpation findings were altered by the treatment. The improvement was rapid and pronounced in 13 out of 14 cases of parametritis. The patients were all remarkably relieved and in most cases the objective improvement was also evident. An important point in this class of cases is that the hot-air treatment causes the retrogression of the parametritic tumors and thus allows discovery of lesions higher up, in case they exist. The subsidence of pain is probably the result of the active hyperemia. In several cases of inflammatory processes in the adnexa the inflammatory edema retrogressed, and a case of actinomycosis was favorably influenced, as also 3 cases of abdominal fistula persisting after a laparotomy. Under the influence of the hot air applied to the fistula, which was first dried and dusted with iodoform to prevent scalding from steam, the wound began to granulate normally and rapidly healed. The menses were hastened by the action of the hot air in some cases, suggesting its application in amenorrhea.

119. Leucocyte Count in Gynecologic Affections.—Waldstein and Fellner tabulate the findings and blood count in 29 cases of various gynecologic affections. Comparison of the details shows that pus-containing tumors of the adnexa in the acute stage are accompanied by leucocytosis. It persists longer than the fever, but subsides in time, notwithstanding the continuance of the pus pocket. Tumors in the adnexa not containing pus are not accompanied by leucocytosis. Thirty-five cases of other gynecologic affections were examined from this point of view and a number with internal hemorrhage, etc. The results showed that much loss of blood from myoma or extrauterine pregnancy may induce a hyperleucocytosis, the more pronounced the greater the hemorrhage. If the organism has time to produce more blood to take the place of what is lost, as in case of small, repeated hemorrhages from a myoma, the leucocytosis may be moderate or imperceptible. On the other hand, in case of much loss of blood, as from rupture of an extrauterine pregnancy, the leucocytosis may be as intense as in case of pus formation. In one case it reached 24,000, a few hours after the operation it was 23,000, and as the patient regained strength it fell to 16,000. In 2 cases of a four weeks' hematocele, the leucocytes numbered 12,000. In 2 other cases examined four to six weeks after tubal abortion the blood count was normal.

120. Extramedian Symphysiotomy.—Van de Velde has coined the term "hebotomy" for this operation, which he remarks was first suggested by Champion eighty years ago, but has only become practicable since Gigli invented the wire saw. It has been performed 12 times to April, 1903. All the mothers recovered with no disturbances and their gait is as perfect as before. All the children were delivered alive. The great advantages of this intervention are that the wound can be protected from contact with the urine and vaginal secretions, and that the sawing of the healthy pubis is followed by a healthy callus formation, which holds the sawed edges apart and thus permanently enlarges the deformed pelvis. In one of his cases he purposely left a gap between the sawn edges the width of a finger. The woman was up in three weeks, had no pain and resumed her life as a working woman in six weeks. A radiogram four months later showed that the pelvis was permanently enlarged, the urethra, clitoris and symphysis permanently asymmetrically displaced to one side, with a difference of 2 cm. from the spin. ant. sup. to the symphysis on the two sides. The pelvis is as solid as ever, and in this case, as with his previously operated patients, the excess of callus is gradually absorbed so that in time there is no trace of the intervention. In case a second hebotomy is required it might be made on the other side, and thus the pelvis be permanently enlarged by 3 to 4 cm., which is the maximum that should be striven for.

121. Influence of Castration on Blood of Female Animals.—For three years Breuer has been studying on dogs the effect of removal of the ovaries on the composition of the blood. He found that castration has an unmistakable effect on regeneration of the blood in younger animals, from seven to ten months old. Older ones were not affected. The ovaries have, therefore, an undoubted influence on the composition of the blood. The disturbances produced by their extirpation bore no resemblance to human chlorosis. He believes that this research is an important support of the genital origin of chlorosis.

124. Epidural Injections in Treatment of Enuresis.—Kapsammer reports the details of 37 cases of enuresis treated by epidural injections according to Cathelin's method, recently described in The Journal, page 527. He has made 300 epidural injections, and has never seen a reaction except twice; once the patient vomited once afterward, probably because the injection had been made too rapidly and was somewhat larger than usual. In the other case the patient vomited twice the day after the injection and the point of the injection was slightly painful. He disapproves of Cathelin's advocacy of epidural injections as a "universal remedy," but thinks that for enuresis the results far surpass all others. He recommends two or three injections at brief intervals, even when the cure seemed to be complete after the first. He proclaims, however, that a saline solution has exactly the same effect as the cocain and may be used in its place. A remarkable feature of this treatment, already noted by others, is that an excessive desire to urinate is reduced and deficient desire stimulated. His experiences have confirmed those of all the others who have tested the method as to its complete harmlessness. The 25 cases completely cured which he describes in detail include 19 with enuresis nocturna and 6 with both nocturna and diurna. The cure dates from fourteen months in 1, ten months in 1, more than six months in 2 and five months in 6; 8 patients were cured by a single injection. Six had been treated by a number of other methods without result. Some of the cases required several injections, one as many as 13 and one 12. He thinks that these latter cases could have been cured quicker if he had injected larger amounts at shorter intervals. Fourteen of the 25 were treated with cocain solution and the others with saline. One was an infant less than 2 years old, consequently the effect can not be ascribed to suggestion; another was a man of 25 with pollakiuria diurna and enuresis nocturna, both cured by 2 cocain injections. Another was a lad of 16 cured by 4 cocain injections of enuresis, both night and day, since early childhood. In a second series of 6 cases the patients left before the final result could be ascertained, and although cured when last seen, are not included in the statistics, as also 6 others still under treatment.

Roussky Vratch, St. Petersburg.

Last indexed page 529.

133 (II, No. 2.) *Problems of the Day in Pharmacology and Materialism.* N. P. Kravkoff.—Sovremenniya problemy pharm. i materialism.
134 *Technic of Laparotomy. V. S. Gruzdeff.—K technikye laparocoeliotomia.
135 * Stomach Digestion in Icterus. S. S. Zimnitzky.—K voprosu o zheldotchnom pitshtchevarenii *pri* zheltukhakh.
136 T[illegible] Intertrigo in Children. S. E. Ostrovsky.—[illegible] u maletchkikh dyetei.
137 *L[illegible] Firearm Wound of Lower Jaw [illegible] —Perevyazka obshtchei sonnoi arterie po povodu, etc.
138 (No. 3.) *Treatment of Surgical Tuberculosis. A. Bobroff.—O sredstvakh borby s chirurg. bugorchatkoi.
139 *Inflation of Stomach to Determine Its Outlines. A. K. Sievert.—K *voprosu* ob opredyelenii granitz zheludka razduvaniem.
140 *Insoluble Albumin from* Albumose During Gastric Digestion. V. V. Zavyaloff.—O rastvorimoi raznovidnosti plasteina.
141 *History of Local Application of Steam in Gynecology and Surgery. M. P. Kozlenko.—Sovremennoe sostoyanie voprosa o primyenenii para v gyn. and chir.
142 *Treatment of Fecal Fistulas. I. I. Grekoff.—O lyetchenii kalovvki
143 Portable [illegible] Current Apparatus. N. P. Domashnev.—O [illegible] rtativnom pribor dlya proizvedeinago dyestviya postoyannym elect. tokom.
144 (No. 4.) *Thermotaxis of White Corpuscles. M. E. Mendelssohn.—O termotaksii byelykh krovnykh tyeletz.
145 (No. 5.) Instruction in Anatomy. V. N. *Tonkoff.*—O prepodavanie anatom. nauk. (Commenced in No. 4.)

146 *Psychologic Basis for Development of Hypnosis. T. E. Rybakoff.—Psych. usloviya razvitiya hypnosa. (Commenced in No. 4.)
147 Eye Affections Caused by Flies. A. V. Lotin.—K voprosu o zabolyevaniyakh glaz vyzyvaemykh litchinkami mukhi Wohlfahrt'a.

134. **Technic of Laparotomy.**—Gruzdeff has long advocated copious flushing of the abdominal cavity with saline solution before closing it after a laparotomy. In 28 cases in which the abdomen was treated by the dry method there were 3 deaths, while only one patient died in the 72 cases in which he followed his method of irrigation, and this fatality was due to other causes. He prefers Locke's solution for the purpose as more nearly approximating the composition of the blood plasm, and pours it into the abdomen three or four times, swabbing out the cavity each time with gauze sponges, and finally leaving a large amount in the abdomen after it is sutured. He thinks that by this means the abdominal cavity is not only cleaned, but the germs that may have found their way in during the operation are washed out and the phagocytes are stimulated to more energetic action. A still further advantage is that the pressure in the abdomen is maintained by the fluid left behind, and it does not tend to collapse after the removal of large tumors. His series includes a variety of indications, as he relates in detail. The pregnancy was not interfered with in one patient on whom a laparotomy was performed on account of peritonitis.

135. **Stomach Digestion in Icterus.**—Simnitzky found that retention of bile from any cause had a marked influence on the digestive processes in the stomach, always inducing hypersecretion until the stomach became exhausted by the chronic course of the affection, after which hyposecretion was the rule. His clinical experience was confirmed by experiments on animals.

137. **Ligation of Carotid for Traumatic Hemorrhage.**—A bullet wound in the neck suppurated and recurring hemorrhages compelled Miklashevsky to ligate the left common carotid artery. This seemed to be well tolerated at first, but after a month hemiplegia developed on the right side, evidently from some focus of softening in the region whose nutrition had been disturbed by the ligature, after anastomosis had been established. The hemiplegia gradually subsided. He has found 914 cases on record in which the common carotid had been ligated, in 337 for the removal of a tumor, in 75 on account of aneurism, in 335 for hemorrhage, and in 54 for neuralgia. About 39.8 per cent. of the patients succumbed to the progress of their affection. The mortality of ligation *per se* has been computed by Hueter at 5 per cent.

138. **Seacoast and Sun Baths in Surgical Tuberculosis.**—Bobroff reports most gratifying results from the sanatorium for children which was established in the Crimea mainly through his efforts. The sea air in this balmy climate, sun and sea bathing are all important factors in the treatment of localized tuberculosis. He lays great stress on direct exposure of the site of the lesion to the sunshine, protected merely by a sheet.

139. **Outlining the Stomach by Inflation.**—Sievert examined 25 subjects, some healthy and others with gastric lesions, to determine the value of this method of diagnosis. He found that the stomach does not distend equally in all directions when gas is generated in it with soda and tartaric acid. The distension seems to be greatest towards the right side. When a moderate amount of gas is formed the findings coincide with those obtained by percussion, auscultation, etc., but if large amounts are generated then the organ is abnormally distended and the findings are not those of the actual condition. This procedure, however, has the advantage that it enables the outlines of the stomach to be determined by the eye.

141. **History of Atmocausis.**—Professor Sneguireff was the first to apply steam to the local treatment of gynecologic affections. During the fifteen years since a long array of communications on the subject have been published, which are reviewed in the present article. Atmocausis, or vaporization as it is called, has proved of signal value in arresting hemorrhage during operations on the liver, in climacteric uterine affections, for cauterizing the uterine mucosa, etc. Pincus and Dührssen have been particularly successful with it in various gynecologic affections; the former advocates it as an ideal means of obliterating the uterine cavity.

142. **Treatment of Fecal Fistula.**—Grekoff describes a case in which exclusion of a portion of the intestine with persisting fecal fistula into the sac was followed later by hernia of the excluded portion, requiring its resection. Two normal pregnancies had occurred in the interim. He recommends resection as an indispensable supplement to the primary intervention, praising the Maisonneuve method of enteroanastomosis as the simplest and least aggressive.

144. **Thermotaxis of the White Corpuscles.**—Mendelssohn proclaims that he has established that the white corpuscles are attracted by heat. This thermotaxis is most pronounced at a temperature of 36-39 C. (97 to 102 F.), but is still marked at 25 to 35 or even 20 to 25 C. In inflammations, therefore, the leucocytes are attracted by thermotaxis as well as by chemotaxis, he believes. Temperatures higher than 102 F. did not seem to attract them.

146. **Psychologic Conditions for Hypnosis.**—Rybakoff ascribes to emotion the chief rôle in the production of the hypnotic sleep. This assumption is sustained by the changes in the heart action and respiration, the subjective sensations during the hypnosis and the fatigue afterward. This condition of emotion enables the subject to respond to the will of the hypnotizer and is the most important requisite for a successful hypnosis. Other causes contribute only as they induce this emotion.

New Patents.

Patents of interest to physicians, August 18-25:

736356. Truss. Mott B. Brooks, Rochester, N. Y.
736744. Surgical ecraseur. Louis R. Kratzmueller, Chicago.
736529. Formaldehyd compound. Roberto Lepetit, Susa, Italy.
737051. Hernial truss. Joel U. Adams, Cincinnati.
737087. Retinoscope. Henry L. De Zeng, Philadelphia.
737365. Invalid's table. George E. Dewey, Grand Rapids, Mich.
737413. Formaldehyd generator. Robert W. Johnson, New Brunswick, N. J.
737258. Catamenial sack. Lee H. Mallalieu and M. Coke, St. Louis.
737008. Lung and voice developer. Peter E. Nichol, Toronto, Canada.
737465. Massage machine. Charles Pfanschmidt and J. Siefert, Chicago.
737473. Mechanism for relief of headache and insomnia. James R. Porter, Richmond, Ill.
737155. Hernial truss. John N. Schiffer, Turtle Creek, Pa.
737526. Surgical bandage. William Sutcliffe, Paterson, N. J.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

U. S. DEPARTMENT OF AGRICULTURE. Index-Catalogue of Medical and Veterinary Zoology. Part IV. (Authors D to Dziembowski.) By Ch. Wardell Stiles, Ph.D., Consulting Zoologist of Bureau of Animal Industry, and Albert Hassall, M.R.C.V.S., Veterinary Inspector, Bureau of Animal Industry. Paper. Washington: Government Printing Office. 1903.

PORTFOLIO OF DERMOCHROMES. By Professor Jacobi of Freiburg in Breisgau. English Adaptation of Text by J. J. Pringle, M.B., F.R.C.P., Physician to the Department for Diseases of the Skin at the Middlesex Hospital, London. Part I. Half leather. Price, $15.00 for Complete Work. London and New York: Rebman, Ltd. 1903.

U. S. DEPARTMENT OF AGRICULTURE. Bureau of Animal Industry—Bulletin No. 46. The Milk Supply of Two Hundred Cities and Towns. By Henry E. Alvord, C.E., Chief of Dairy Division, and R. A. Pearson, M.S., Assistant Chief of Dairy Division. Paper. Pp. 210. Washington: Government Printing Office. 1903.

LUCOTHERAPY OR THE THERAPEUTIC ACTION OF LIGHT. By Corydon Eugene Rogers, M.D., Seattle, Wash., U. S. A. A Practical Treatise on the Principal Methods of Employing Light Rays in the Treatment of all Germ Diseases. Cloth. Price, $2.00. Pp. 155. Seattle, Wash.: The Metropolitan Press, Inc.

CONSUMPTION A CURABLE AND PREVENTABLE DISEASE. What a Layman Should Know About It. By Lawrence F. Flick, M.D., Founder of the Pennsylvania Society for the Prevention of Tuberculosis. Cloth. Pp. 295. Price, $1.00. Philadelphia: David McKay. 1903.

HIGH-FREQUENCY CURRENTS IN THE TREATMENT OF SOME DISEASES. By Chisholm Williams, F.R.C.S. Edin., M.R.C.S. Eng. Cloth. Pp. 222. Price, $2.75, net. London and New York: Rebman, Ltd. 1903.

FOOT AND MOUTH DISEASE. By D. E. Salmon, D.V.M., Chief of Bureau of Animal Industry. Paper. Reprint from Nineteenth Annual Report of the Bureau of Animal Industry. 1902.

Report of the Trustees of Bellevue and Allied Hospitals for Quarter Ending March 31, 1903. Paper. Pp. 22. New York: Mail and Express Company. 1903.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. Army, under orders from the Adjutant-General's Office, Washington, D. C., for the week ending Saturday, Sept. 5, 1903:

Birmingham, Henry P., major-surgeon, is detailed for duty as chief surgeon on the staff of Major-General J. C. Bates during the Army maneuvers to be held in the vicinity of West Point, Ky., and will report by letter to that officer for instructions. Major Birmingham will proceed at such time and to such place as may be designated by Major-General Bates.

Bising, A. G., is granted leave for one month.

Cable, G. L., contract surgeon, is relieved from further duty at Fort Clark, and will proceed to his home for annulment of contract.

Harmer, J. R., contract surgeon, is granted leave for two months.

Ireland, M. W., major-surgeon, will report to the commanding officer Third Battalion Engineers for duty with the headquarters, staff and Companies L and M of that battalion while en route to San Francisco, and, on the completion of this duty, will return to his station in Washington, D. C.

Sabin, W. E., contract surgeon, is assigned to temporary duty at Vancouver barracks.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending Sept. 5, 1903:

Asst.-Surgeon O. Kohlase, Sept. 10, 1903, detached from duty at the Naval Hospital, Mare Island, Cal., and ordered to duty at the Naval Museum of Hygiene and Medicine, Oct. 1, 1903.

Asst.-Surgeon R. K. McClanahan, en route home from Asiatic Station, via the *Solace*.

Asst.-Surgeon C. M. Oman, detached from the *Solace* and ordered to the *Monadnock*.

Asst.-Surgeon H. A. Dunn, detached from the Naval Station, Cavite, P. I., and ordered to the *Solace*.

Asst.-Surgeon R. A. Bachman, ordered to the Naval Station, Cavite, P. I.

Asst.-Surgeon F. M. Munson, ordered to the *Frolic*.

Asst.-Surgeon H. F. Strine, ordered to the *Isle de Cuba*.

Asst.-Surgeon J. L. Neilson, ordered to the *Iris*.

Marine-Hospital Changes.

Official list of the changes of stations and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the fourteen days ended Sept. 3, 1903:

Surgeon J. A. Gassaway, Department letter granting him leave of absence for two months from August 10, amended to read two months from August 13..

Surgeon G. W. Stoner, granted seven days' leave of absence from August 29, under paragraph 189 of the Regulations.

Surgeon H. R. Carter, Bureau letter granting him leave of absence for thirty days from August 4, amended so as to read twenty-four days from August 5.

Surgeon G. M. Magruder, granted leave of absence, on account of sickness, for thirty days from Sept. 7, 1903, or so much thereof as may be necessary.

Surgeon R. M. Woodward, granted two days' leave of absence from Aug. 20, 1903, under paragraph 189 of the Regulations.

P. A. Surgeon M. J. Rosenau, detailed as chairman of Working Party No. 2, Yellow Fever Institute, and directed to proceed to Vera Cruz, Mexico, for special temporary duty in connection therewith.

P. A. Surgeon M. J. White, relieved from duty at Portland, Ore., and directed to proceed to Honolulu, T. H., and report to medical officer in command for duty, relieving Asst.-Surgeon J. M. Holt. Granted leave of absence for three days from September 5.

P. A. Surgeon L. D. Fricks, to proceed to Baltimore and report to Surgeon H. R. Carter for temporary duty in connection with the inspection of immigrants at that port.

P. A. Surgeon H. B. Parker, relieved from temporary duty at Washington, D. C., and, as chairman of Working Party No. 2, Yellow Fever Institute, and directed to report to P. A. Surgeon M. J. Rosenau, and to proceed to Vera Cruz, Mexico, for duty under his direction.

Asst.-Surgeon H. A. Stansfield, on being relieved from duty at Mariveles, P. I., to proceed to San Francisco, and report arrival by telegraph.

Asst.-Surgeon J. M. Holt, on being relieved from duty at Honolulu, T. H., to proceed to Manila, P. I., and report to P. A. Surgeon V. G. Heiser for duty.

Asst.-Surgeon C. W. Vogel, relieved from duty at San Francisco, and directed to proceed to Manila, P. I., and report to P. A. Surgeon V. G. Heiser for duty.

Asst.-Surgeon C. W. Wille, on completion of duties at Baltimore, to proceed to Philadelphia and assume temporary command of service at that port during absence, on leave, of Surgeon F. Irwin.

Asst.-Surgeon J. W. Amesse, on being relieved from duty at Jolo, P. I., to proceed to San Francisco and report arrival by telegraph.

Asst.-Surgeon M. W. Glover, granted leave of absence for one month from September 8.

Asst.-Surgeon Edward Francis, relieved as temporary chairman of Working Party No. 2, Yellow Fever Institute. and directed to report to P. A. Surgeon M. J. Rosenau as member of Working Party No. 2 on his arrival at Vera Cruz, Mexico.

Asst.-Surgeon R. H. Creel, relieved from duty at Immigration Depot, New York, and directed to proceed to Manila, P. I., and report to P. A. Surgeon V. G. Heiser for duty.

A. A. Surgeon L. C. Bean, granted leave of absence for two days from September 4.

A. A. Surgeon D. M. Echemendia, granted leave of absence for seven days from Aug. 20, 1903, on account of sickness, under paragraph 210 of the Regulations.

A. A. Surgeon L. P. Gibson, granted leave of absence for six days.

A. A. Surgeon S. B. Hunter, granted leave of absence for six days.

A. A. Surgeon W. A. Kimmet, granted leave of absence for two weeks from August 25.

A. A. Surgeon W. J. O'Reilly, granted leave of absence for three days from September 8.

A. A. Surgeon R. H. Peters, granted leave of absence for twenty days from August 4.

Pharmacist W. F. Macdowell, granted leave of absence for thirty days from September 14.

Pharmacist W. L. Stearns, granted leave of absence for thirty days from September 8.

Pharmacist G. A. Morris, to report to chairman of board of examiners at Fort Stanton, N. M., Sept. 12, 1903, for examination to determine his fitness for promotion to the grade of pharmacist of the second class.

Pharmacist F. Siedenburg, granted leave of absence for thirty days from September 5.

BOARDS CONVENED.

Board convened at Fort Stanton, N. M., Sept. 12, 1903, for the examination of Pharmacist G. A. Morris, to determine his fitness for promotion to the grade of pharmacist of the second class. Detail for the board: Surgeon P. M. Carrington, chairman; Asst.-Surgeon J. W. Trask, recorder.

Board to meet at Washington, D. C., on call of the chairman, to consider certain matters relative to uniform regulations of the Service. Detail for the board: Assistant Surgeon-General A. H. Glennan, chairman; Assistant Surgeon-General G. T. Vaughan, Assistant Surgeon-General H. D. Geddings, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Sept. 5, 1903:

SMALLPOX—UNITED STATES.

California: Sacramento, Aug. 6-23, 2 cases; San Francisco, Aug. 16-23, 1 case.

Colorado: Denver, July 25-Aug. 15, 6 cases.

Illinois: Chicago, Aug. 22-29, 4 cases, 2 deaths.

Indiana: South Bend, Aug. 22-29, 1 case.

Massachusetts: Fall River, Aug. 22-29, 1 case.

Michigan: Marquette, Aug. 22-29, 1 case; Port Huron, Aug. 22-29, 1 case.

Mississippi: Natchez, Aug. 22-29, 1 case.

New Jersey: Camden, Aug. 22-29, 1 case.

Ohio: Dayton, Aug. 22-29, 3 cases.

Pennsylvania: Erie, Aug. 15-22, 1 case; Pittsburg, Aug. 23-30, 95 cases, 13 deaths, 1 case imported.

Texas: San Antonio, July 1-31, 14 cases.

Utah: Salt Lake City, Aug. 15-22, 1 case, imported from Idaho.

Virginia: Pocahontas, Aug. 22-29, 1 case.

Wisconsin: Milwaukee, Aug. 22-29, 2 cases.

SMALLPOX—INSULAR.

Philippine Islands: Manila, July 11-18, 1 case, 1 death.

SMALLPOX—FOREIGN.

Belgium: Brussels, Aug. 8-15, 3 deaths.

China: Shanghai, July 11-18, 1 death.

Colombia: Barranquilla, Aug. 8-16, 3 deaths.

France: Paris, Aug. 1-8, 1 death.

Great Britain: London, Aug. 8-15, 9 cases; Manchester, Aug. 8-15, 1 case; Newcastle-on-Tyne, Aug. 8-15, 10 cases, 1 death; South Shields, Aug. 8-15, 1 case; West Hartlepool, Aug. 8-15, 2 cases.

India: Bombay, July 28-Aug. 4, 5 deaths.

Mexico: City of Mexico, Aug. 16-23, 9 cases, 5 deaths.

Russia: Moscow, Aug. 1-8, 2 cases, 1 death; Odessa, Aug. 8-15, 1 case.

YELLOW FEVER—UNITED STATES.

Mississippi: Gulf Quarantine, Sept. 1, 1 death, from schooner Henrietta G. Powell from Vera Cruz.

YELLOW FEVER—FOREIGN.

Colombia: Panama, Aug. 17-24, 3 cases, 1 death.

Costa Rica: Limon, Aug. 13-30, 4 cases, 2 deaths; San Jose, Aug. 13-30, 2 cases; Zent, Aug. 13-30, 4 deaths.

Mexico: City of Mexico, Aug. 16-23, 1 death; Linares, Aug. 24, 14 deaths; Merida, Aug. 9-15, 10 cases, 5 deaths; Progreso, Aug. 15-22, 2 cases; Monterey, Aug. 26, 1 case; Tampico, Aug. 16-22, 19 deaths; Tehauntepec, Aug. 9-15, 4 cases, 3 deaths; Teran, Aug. 27, present; Salina Cruz, Aug. 9-15, 3 cases, 2 deaths; Valladolia, Aug. 9-15, 1 case; Vera Cruz, Aug. 8-22, 112 cases, 44 deaths.

CHOLERA—INSULAR.

Phillippine Islands: Manila, July 11-18, 7 cases, 7 deaths; Provinces, July 11-18, 1,369 cases, 825 deaths.

CHOLERA—FOREIGN.

China: Hongkong, July 15-22, 1 death.

India: Calcutta, July 25-Aug. 1, 12 deaths.

Turkey: Damascus, July 21-Aug. 18, 57 deaths; Damascus Province, July 21-Aug. 18, 312 deaths; Tripoli, July 25, present.

PLAGUE—INSULAR.

Hawaii: Honolulu, Aug. 18, 1 death.

Philippine Islands: Manila, July 11-18, 1 case.

PLAGUE—FOREIGN.

China: Hongkong, July 15-22, 18 cases, 9 deaths.

India: Bombay, July 28-Aug. 4, 100 deaths; Calcutta, July 25-Aug. 1, 12 cases; Karachi, July 26-Aug. 2, 2 cases, 2 deaths.

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Original Articles.

THE VARIOUS METHODS OF PRESERVING AND MOUNTING GROSS EYE PREPARATIONS.*

CASEY A. WOOD, M.D.
CHICAGO.

Early methods of preserving the enucleated eyeball and other ocular tissues were very crude. The specimen was generally placed in a bottle of ethylic or methyl alcohol of unknown strength, which not only bleached and hardened the tissues, but rendered them useless for future microscopic sections. Shrinking of the globar walls and intraocular structures proceeded until the parts became unfit for use, either as museum preparations or for other teaching purposes. Attempts were now and then made, by the addition of glycerin and other agents to the alcohol, to retard these changes, but with little permanent success. Bichlorid solutions, Müller's fluid and other chromate preparations were found to be improvements on the alcohol mixtures, but even these were not satisfactory, requiring constant care and frequent changing of the fluid, else the tissues were not affected by stains subsequently used for microscopic sections. In any case the cornea became opaque, the iris discolored, the other parts stained, and only the coarsest changes in the bisected globe, such as tumors, dislocated lenses, detached retinæ, etc., could be distinguished. Indeed, it was not until Priestley Smith devised his well-known plan of preparing and mounting the divided eyeball in a glass receptable containing gelatin that a decided advance was made in the preservation and exhibition of gross specimens.

Preparations of thick sections of the eyeball may be preserved, although not as effectively as in specimen jars, by placing them on discs of opal glass over which a little prepared and melted jelly has been poured. The specimen is now covered with more jelly, air bubbles are removed by pricking them, and when the mass is hard enough a plano-convex lens is attached to the surface of the specimen just as one would apply a cover glass.

DRY METHODS OF PREPARATION.

An ingenious plan was that of Hyrtl. He pierced the optic nerve of the enucleated eyeball and through the opening expressed the intraocular contents. The hollow globe was then inflated and dried. Beyond demonstrating the size and shape of the eye this method is useless, and has long been abandoned.

A more profitable proceeding is to harden the divided globe in alcohol, dehydrate by any suitable method and soak for ten days in turpentine. At the end of this time the tissues will be quite transparent. Now allow the turpentine to evaporate slowly. Such a specimen, if merely protected from dust, will keep indefinitely and will, especially when examined with a lens, show the tissues almost as well as in any of the preparations about to be described. However, these preparations degenerate in time, owing to injury from handling and from exposure to dust and smoke.

THE PRIESTLEY SMITH GELATIN METHOD.

The eyeball, generally preserved in Müller's fluid, is frozen,[1] divided by means of a sharp razor and, when required, immersed in a 2 per cent. chloral-hydrate solution to remove at least a part of Müller's stain. This procedure is repeated every day or two until no *staining of the immersion fluid results. To prevent* shrinkage of the half eye when it is placed in the jelly, it is next given, for 24 hours each, a bath of 10, 25 and 50 per cent. glycerin. It is now (concave surface up) transferred to the glass jar, which should be about half filled with the melted gelatin. When the fluid jelly has entirely filled the hemisphere it is turned over so that its plane surface is accurately applied to the bottom of the specimen jar. Great care must be observed to prevent the retention of air bubbles within the globe or in the gelatin surrounding it. When the jelly is hard the jar is carefully filled with more gelatin.

The jelly consists of Coignet et Cie's gelatin, 1 part, glycerin and water, of each, 8 parts by weight. Slowly dissolve the gelatin in the water by the aid of gentle heat; add the white of one egg; boil thoroughly and filter through flannel. Finally, stir in the glycerin, to which has been added 0.1 per cent. of carbolic acid. The jar covers may be of ordinary clear glass, or of the white opalescent variety, cemented by means of four parts of gutta percha and one part of pitch. The jars were originally made by and can be had of Messrs. Osler, Broad street, Birmingham, England. Treacher Collins suggested that a plano-convex lens be cemented on the upper surface of the jars by means of Canada balsam. This arrangement enlarges considerably the intraocular image and shows the minor details of the specimens. At the request of the committee several gentlemen (whose efforts contributed much to the success of the exhibit at New Orleans and whose practical experience permits them to speak with authority) have furnished a description of their favorite methods of mounting macroscopic eye preparations.

Dr. George Sloan Dixon[2] published an article on the "Preservation of Macroscopic Eye Specimens," most of which is here reprinted with an addendum giving a few modifications made by him since its publication. This monograph furnishes a complete description of the formalin-jelly method of preparing the Priestley Smith mounts. It will also be seen that, in many respects, it is a decided improvement over the original mode of preparation.

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* Report of the Committee on Exhibit of Pathologic Preparations at the Section on Ophthalmology, American Medical Association, New Orleans, May 5-8, 1903. Casey A. Wood, Chairman; H. V. Würdemann and E. A. Shumway.

[1] See the Ophthalmic Review, March, 1883.

[2] New York Eye and Ear Infirmary Reports, January, 1898.

The preparation of macroscopic eye specimens was very unsatisfactory until the advent of formalin as a hardening reagent. Time is also greatly economized by the use of formalin, as it requires but twenty-four hours to effect the preliminary hardening.

Formalin will not harden the vitreous, although it has the property of rendering this substance less viscid. For example, if an eye be removed from the formalin bath at the end of the first twenty-four hours and divided, the normal vitreous will be of a consistence similar to thin syrup, and is sure to be lost during subsequent manipulation.

In the majority of instances the loss of vitreous is of no great importance, but a more nearly normal macroscopic specimen will of course be obtained if it be preserved, and in some cases it is quite necessary. Therefore, in specimens where it is desirable to retain the vitreous, alcohol must be employed.

Another advantage obtained by the use of formalin, especially in intraocular tumor specimens, is that the finished mount shows the original colors to have been almost wholly retained, very little bleaching occurring.

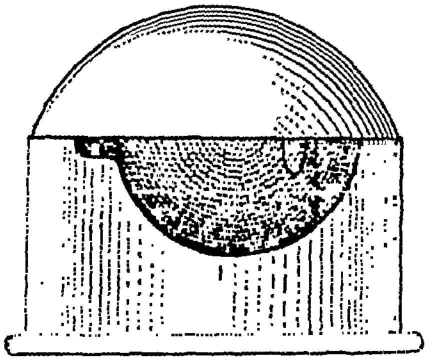

Fig. 1.—Treacher Collins' modification of the Priestley Smith jar.

As soon as possible after enucleation puncture the globe at or near the equator with a small knife, in order to admit the fluid, and place it in a wide-mouth bottle containing a little absorbent cotton, and enough of a 10 per cent. solution of formalin in distilled water to cover it. Allow the eye to remain in this solution for twenty-four hours, and then transfer it to weak alcohol, 25 per cent. to 50 per cent., depending on the density of the globe, and increase the strength of the alcohol by about 10 per cent. daily. An inclination to collapse is an indication that the alcohol is being increased too rapidly. When the strength of the alcohol has reached 80 per cent., allow the specimen to remain in it for four days, or indefinitely if intended for future use. At the end of this time the vitreous will have become sufficiently dense to permit division of the globe without loss.

The next step in the progress is to remove the alcohol in order to permit the globe to be frozen. This is done by placing it in from ten to twenty times its volume of water for twenty-four hours. It is well to change the water at least once, though this is seldom necessary. When the globe has settled to the bottom of the vessel, sufficient alcohol will usually have been removed to allow freezing.

The freezing box should not be less than seven inches square—nine inches is a very good size. It should have a few holes in the bottom for the purpose of drainage.

Remove the globe from the water, dry it carefully with a soft towel or piece of gauze, cut off the nerve close to the sclerotic and draw an ink line from cornea to nerve on both sides to indicate the direction desired to cut. In the majority of instances the horizontal plane is selected. Wrap the globe in oiled silk, without pressure on the globe. Fill the box with mixed pounded ice and salt, deposit the globe in the middle, cover and allow it to remain in a cool place for one hour. Remove the globe, rest it on a piece of cork and divide it quickly with a thin sharp knife in the line previously drawn, being careful not to employ more sawing motion than is absolutely necessary, and further, do not rest the cornea on the cork.

Having divided the globe, place the hemispheres in distilled water to thaw. After ten or fifteen minutes remove the half selected for microscopic examination to 25 or 50 per cent. alcohol, and gradually increase the strength from day to day until 80 per cent. has been reached, where it may remain awaiting the further treatment required for imbedding. At the same time transfer the half selected for the macroscopic specimen to a 5 per cent. aqueous solution of chloral hydrate for twenty-four hours; glycerin and one-third water twenty-four hours; finally, equal parts of glycerin and water for twenty-four hours, when it will be ready to mount in glycerin jelly.

The formula for glycerin jelly has been repeatedly published, but as ordinarily made it almost invariably has a marked amber tinge. This may be due to the quality of the gelatin used, but we think this is frequently caused by the material through which it is filtered, flannel usually being recommended. The best quality of (so-called "French Gold Label") gelatin should be used, and nothing containing color should come in contact with the jelly during its preparation—even the shells of the eggs employed should be rejected if not pure white.

The following method of preparing the jelly has been uniformly successful in our hands, and we, therefore, give it in detail: Take gelatin, 1 part; water, 8 parts, and glycerin, 8 parts.

We generally add a trifle more gelatin, say 0.5 per cent. Cut the gelatin into small pieces, place in a glass vessel with a very wide mouth (fruit-jars are unreliable—agateware works well), add the water, cover and let it stand for an hour, then place the whole in an Arnold sterilizer, or in a water bath, and apply only sufficient heat to dissolve the gelatin. When dissolved stir in the albumin of one fresh egg (with its shell if white) for each ℥viii. Replace in the sterilizer and boil until complete separation has occurred. Filter hot through absorbent cotton. A hot-water funnel is useful for this purpose. If the filtrate is not absolutely clear repeat the operation. The glycerin is then added, and also enough carbolic acid to preserve it—not more than ʒi of a 10 per cent. aqueous solution for each ℥vi of jelly.

If carefully made in this manner the jelly will be almost free from color, and of about the same index of refraction as the glass of which the macroscopic cups are made.

The jelly should be kept in two flasks, a large one for stock and a small one for use from day to day; both should be closed with cotton-wool plugs. The larger (or stock) flask should be heated only when necessary to fill the smaller one. Exclude light as much as possible. If evaporation occurs to any considerable extent before the jelly has been used, a little sterilized distilled water can be added.

The specimen is now ready to embed in its macroscopic cup. The cups (see cut) in use in this institution are 1⅞ inches in diameter by 15/16 inch deep, made of crown glass, upper surface highly polished and edge ground true.

Remove the surplus glycerin and water from the specimen and deposit it in the cup, cut surface up. Fill the cup with warm (not hot) jelly, tease out with warm needles all the air bubbles that have become imprisoned, turn the specimen over, press it firmly on the bottom of the cup, examine over a mirror, center and retain it in position by means of a small piece of cigar box (⅝ by 2 inches), through the center of which an ordinary pin has been driven. It is not necessary that the pin should penetrate the specimen, but it should be long enough to permit the greater part of the weight of the piece of wood to be transferred to the specimen at the point of the pin. If the mount is satisfactory place it under a bell-jar to exclude dust, and with it a piece of absorbent cotten saturated with about a dram of formalin.

The statement has been made several times that the exposure of nutrient jelly to the vapor of formalin renders it insoluble by heat. Formalin vapor, free under a bell-jar, will render the surface of glycerin jelly in macroscopic cups denser to a very slight depth, but not wholly insoluble. A cup of jelly so exposed for five days could still be completely melted in an Arnold sterilizer, with the exception of a very small ring at the margin of the cup.

Although formalin vapor acting on glycerin jelly under a bell-jar does not render the entire mass insoluble, no mean advantage is gained by its use, as a greater degree of heat is required to cause it to "run" and displace the specimen. In fact, I have frequently noted liquefaction of old mounts during the summer months when the thermometer stood at 98 or 99 F., although the usual melting-point of normal glycerin jelly is about 105 F.

It would seem hardly necessary to call attention to the fact that pathologic specimens should not be exposed to a greater degree of heat than is absolutely necessary; but this should particularly be borne in mind with reference to the eye, as immediately the limit of heat is reached (and the degree is comparatively low), the globe, or hemisphere, will suddenly collapse and be damaged beyond hope of repair. Therefore, if there is any likelihood of necessity arising for redissolving the glycerin jelly surrounding a specimen, we would advise against the use of formalin for "setting" the jelly.

After standing for two or three days, the cup should be sealed to prevent further evaporation. We have found the most satisfactory material for this purpose to be porcelainized glass. It is pure white, and greatly improves the appearance of the specimen. It is attached to the bottom of the cup with Stratena or Major's cement, applied hot. A celluloid disc answers the same purpose, but it is not pure white, and we have been unable to find a satisfactory cement for it.

The mount has now been completed and can be filed away, but we prefer to still further protect it by cementing it into a square wooden base. These blocks are made of mahogany, and are countersunk in the middle about a quarter of an inch.

It is occasionally an advantage to cement a lens to the upper surface of the cup to show a foreign body, or anything of especial interest located below the surface. For ordinary specimens, however, we consider a permanent lens a useless expense, and, in the majority of cases, a disadvantage. When applied, for which Canada balsam should be used, the lens should be warm, and, of course, the surface absolutely clean.

The accompanying full-size outline cut shows all the parts referred to, and their relations.

Specimens prepared in this manner, if properly sealed, should remain in perfect condition indefinitely; but it will occasionally happen that the cement may not have perfectly attached the disc to the cup, and slow evaporation will occur. This will sooner or later be manifested by fissure of the gelatin, necessitating remounting if the fissures can not be filled with fresh jelly without imprisoning air. A good result can be obtained by cutting away the jelly about the specimen with a sharp knife, leaving smooth surfaces and the specimen *in situ;* then refill the cup with warm jelly. In case air has found its way under the specimen, cut off the upper surface of the jelly and melt with very gentle heat (not over 112 F.) and remount as before.

The well-known fact that exposure to light tends to darken gelatin suggests the advisability of shielding the mounted specimens from strong light especially.

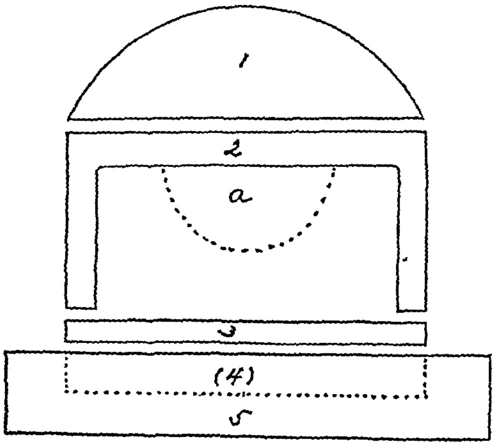

Fig. 2.—Full-size outline figure of macroscopic cup and accessories (Dixon). 1, Lens; 2, macroscopic cup; 3, porcelainized glass disc; 5, mahogany base showing (4) portion countersunk for reception of 2 and 3; (a) specimen.

July 1, 1903.—About the only modifications made in the foregoing methods since its publication consists in the more thorough drying of the specimen with calcium chlorid under a bell-jar, and a change in the manner of cementing the bottom on.

For this purpose we use Bell's cement, sometimes Major's cement, and sometimes Stratena. After the cement has thoroughly set we give the joint two or three coats of zinc white, allowing each to dry thoroughly, and then for a finish apply a ring of asphalt. The latter is, however, not necessary.

Care should be taken not to expose the specimen too long to formaldehyd, as a reaction is likely to occur rendering the jelly opalescent. This causes no special damage, but the jelly ceases to be sparkling.

The disadvantage of the method is that in very hot weather the jelly may become liquid in a few specimens, but this has been largely obviated by turning the specimens upside down.

The advantages are that the natural colors can be in the main preserved, all the parts are held in their normal positions by the density of the medium, they are readily photographed, and they can be transported with safety; beside a globe damaged during laboratory manipulation can be restored with a little patience and a hot needle.

Dr. Harold G. Goldberg (Wills Eye Hospital, Philadelphia) prefers the formalin-glycerin-jelly method modified as follows: Gelatin (best French) oz. i. Cut in small strips and soak in water for twelve hours, pour off water and dissolve in solution (x).—Glycerin, fl. oz. viii; water, fl. oz. viii.

Egg albumin, fl. oz. vi; thoroughly break up in graduate with spoon and mix with fl. oz. iii of sol. marked x, which should be hot when mixed. Filter through flannel into remaining sol. marked x, and mix thoroughly; place on water bath and after coming to boiling point, allow solution to simmer without stirring for five minutes until all the albumin is coagulated. Filter through hot water funnel, or anything that will serve the same purpose, and add 30 m. of pure formalin, a drop at a time, stirring after each drop to prevent lumps forming; then cool.

This jelly is almost colorless, transparent and very firm, and is not melted by summer heat; in fact, after the jelly is several months old it is very difficult to melt it, even by prolonged exposure to the heat of a water bath.

In cases where the tissues are thoroughly impregnated with about 10 per cent. formalin solution before mounting, the additional formalin causes the jelly to contract, as it grows older (possibly over a period of several months), squeezing the water contained in it from its substance. This collects on the surface in drops; therefore, I do not permanently seal the lid of the cell until this complete contraction has taken place, nor do I quite fill the cell with jelly, allowing sufficient space for the water to collect. After this contraction has taken place, it is impossible to melt the jelly with even the actual flame; it will burn, but not melt, and if it becomes necessary to remove the tissue the jelly must be dissolved away.

Tissues hardened in 5 or 10 per cent. formalin solution having remained in the solution several days, may be frozen, cut and mounted without any further preparation.

If tissues hardened by the other methods, after having passed through the alcohols, are placed in a 5 or 10 per cent. solution of formalin for twelve hours, their preservation in the jelly will be more complete and permanent.

When the tissues are impregnated with the formalin solution, a capsule 5 or 6 mm. in thickness is formed around the eye, due to the hardening action of the formalin on the jelly. If the vitreous chamber is not already filled it will be occupied by a mass of tough jelly which preserves the form of the globe.

In any event, all alcohol must be removed from the tissues before mounting in the jelly or air bubbles will form around the tissues and spoil the appearance of the mount. I have mounted a number of eyes that had remained in 10 per cent. formalin solution only twelve hours. These were frozen, cut and mounted in the jelly immediately, thus practically preserving the first changes noticed. I believe it is possible (although I have never had an opportunity to try it) to preserve a perfectly fresh specimen in the jelly without any preparation whatever.

I obtain my mounts (the ordinary cut glass dishes, with white covers) from Wall & Ochs, opticians, Philadelphia. The jars are sealed with common white photographic paste (which is easily removed) until contraction has completely taken place. Then the water, which I have described as collecting for months, is removed and the jars permanently sealed with xylol-balsam.

The advantages of this jelly, beside those I have already mentioned, are that it is a preservative for the tissues, which can be removed from it within several months, or possibly longer, and cut and stained for microscopic study. It also fixes the natural color of the tissues and is easily prepared. I have some specimens that I placed three years ago in this jelly that are quite as good to-day as when first preserved.

Dr. Allen Greenwood, Boston, does not claim originality for the method he prefers.

In order to preserve the colors he hardens the enucleated eye by the Kaiserling method as follows:

1. Fixation for 1 to 4 days in

Formaldehyd	200
Water	1,000
Nitrate of potassium	15
Acetate of potassium	30

2. Drain and place in 80 per cent. alcohol for 1 to 6 hours, then in 95 per cent. alcohol for 1 to 2 hours to restore the color.

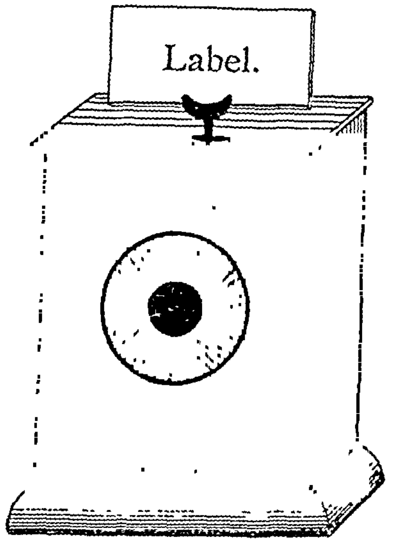

Fig. 3.—Jar for museum specimens (Greeff).

3. Preserve in

Acetate of potassium	200
Glycerin	400
Water	2,000

Fixation should be performed in the dark and the specimen kept in a dark place.

To section the eye it is first frozen by packing in pounded ice and salt.

The half eye to be mounted is then placed in the glass dish with the cut surface down and the melted glycerin jelly poured in. If the glass dish is put on ice the layer of jelly next to the specimen will harden and the eye be held in place until the whole mass is hard enough to prevent the eye from floating. The dish should be filled full enough to exclude all air bubbles when the lid is applied. After the jelly becomes hard the lid is sealed on with Canada balsam.

The jelly is made as follows from a formula given by Dr. Verhoef.

Best French gelatin (Coignet's gold label)	30 grms.
Cold saturated boric acid sol.	240 c.c.

Add 80 c.c. of glycerin and the white and shell of an egg, heat in a water bath, add 1 c.c. of glacial acetic acid to precipitate the albumin, boil thoroughly for some minutes and then filter three or four times. Put the filtering apparatus in a steam sterilizer to prevent hardening of the jelly.

PERMANENT PREPARATIONS IN FLUID PRESERVATIVES.

Once surrounded by and impregnated with jelly, it is with great difficulty and small satisfaction that the bulbar hemisphere is utilized for microscopic purposes. This drawback can be obviated by its preservation in suitable fluids. The best known method is that of Greeff, a cut of whose jar for museum specimens is here given. A description of this form of preparation will be found in this author's small primer,[3] *Anleitung zur mikroskopischen Untersuchung des Auges,* 1898, pp. 67, 69.

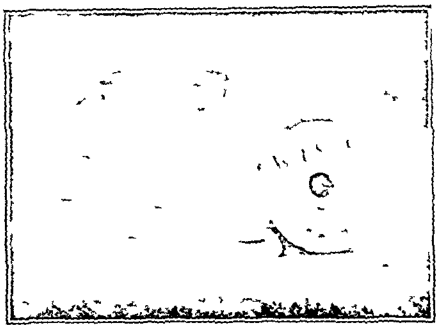

Fig. 4.—Jar for mounting gross eye specimens (Thomson).

A number of modifications of the original method have been proposed by various pathologists, both as regard the form of the glass receptacle and the preserving fluid.

Dr. Edgar S. Thomson (Manhattan Eye and Ear Infirmary) advises that the specimen, after a thorough washing, be hardened for 24 hours in formalin, 4 per cent. The globe is then bisected, and the piece intended for mounting is wrapped in absorbent cotton, to prevent shrinkage, and immersed for three days in the following solution:

Acetate of soda	3
Kali chlorid	5
Formalin	10
Water	100

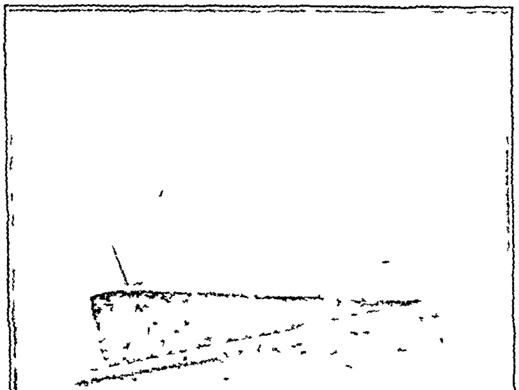

Fig 5.—The Specimen held in position by a glass rod (Thomson).

The specimen is then wrapped in a fresh piece of cotton and immersed in alcohol varying between 80 and 95 per cent., depending on the strength and resistance of the specimen to shrinkage. The alcohol should be as strong as possible. It is immersed in this for twenty-four years, and finally is soaked for two or three days in the following solution:

Acetate of potash	90
Glycerin	180
Water	300

After which it is mounted in a fresh solution of the last formula.

The jars (see cuts) are from E. B. Meyrowitz of New York city. Dr. Thomson has not been in the habit of sealing the jars, finding that with glycerin preparation air bubbles are not apt to appear. The advantages of the method are as follows: It preserves the color and gives proper transparency to the cornea and lens and the specimen can be removed from the jar at any time and a section made, although these are not as satisfactory as fresh sections, on account of the shrinkage which the glycerin causes; it is nevertheless possible to make them, which can not always be said of the glycerin-jelly specimens. The method is simple, and specimens prepared three years ago have kept very well.

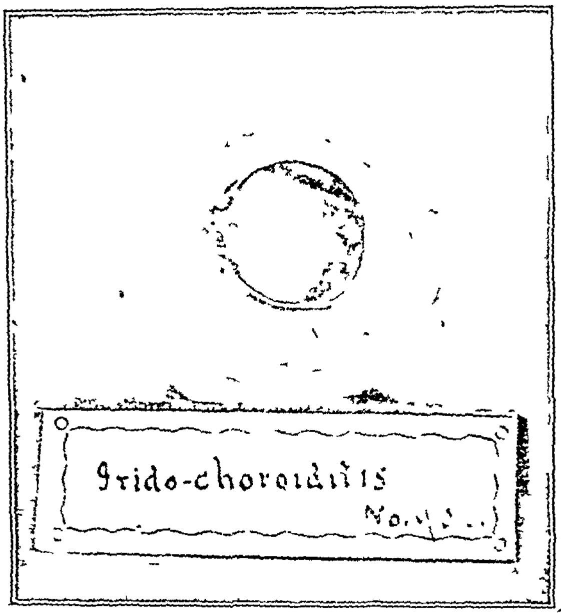

Fig 6.—The specimen on the block for exhibition (Thomson).

Dr. E. V. L. Brown (Illinois Eye and Ear Infirmary) describes "The Technic and Advantages of the Greeff Method of Mounting Macroscopic Eye Preparations" as follows. One needs, in addition to the glass jar shown in the accompanying cut, the following:

1. A 3 per cent. formalin or Kaiserling solution.
2. Some gelatin glue. Dissolve three or four strips of ordinary cooking gelatin in an equal bulk of water and boil until the mass is thick and tenacious. It is then ready for use. On cooling, the solidified mass may be preserved for future use by adding a little alcohol; heat will promptly liquefy it.
3. Some shellac or japanner's gold size; "liquid glass" to seal the cover. The gelatin glue will answer this purpose very well unless the mount is to be sent through the mails.

The technic is not difficult. Carefully dry the half or one-third section of the eye, lay the jar on its side, put a drop of the gelatin glue inside, and place the specimen in position. Allow the glue to harden for fifteen minutes; place the jar upright, fill it with the solution and seal the cover. A small clasp may now be glued to the cover to carry a label or photograph.

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[3] English readers will find a good translation of this little book by Hugh Walker, published by Blakiston, 1902, entitled "A Guide to the Microscopic Examination of the Eye."

The advantages of this method, especially over the Priestley Smith method so generally used in past years, are obvious, namely:

1. The Greeff method is quicker. It takes several days to prepare the gelatin, mount the eye and allow the jelly to harden according to the Priestley Smith method. The writer has mounted as many as twenty eyes by the Greeff method in a single morning.

2. The method is simpler and the mount more permanent. A good clear gelatin of the right consistency which will retain its solidity in hot weather is difficult to obtain.

3. It is cheaper by two-thirds. The Greeff jars may be had of E. Leitz, 34 S. Clark street, Chicago, for 10 cents each. The Priestley Smith jar costs 30 cents, while good gelatin costs a dollar a package; on the other hand, formalin or Kaiserling solutions are always on hand and inexpensive.

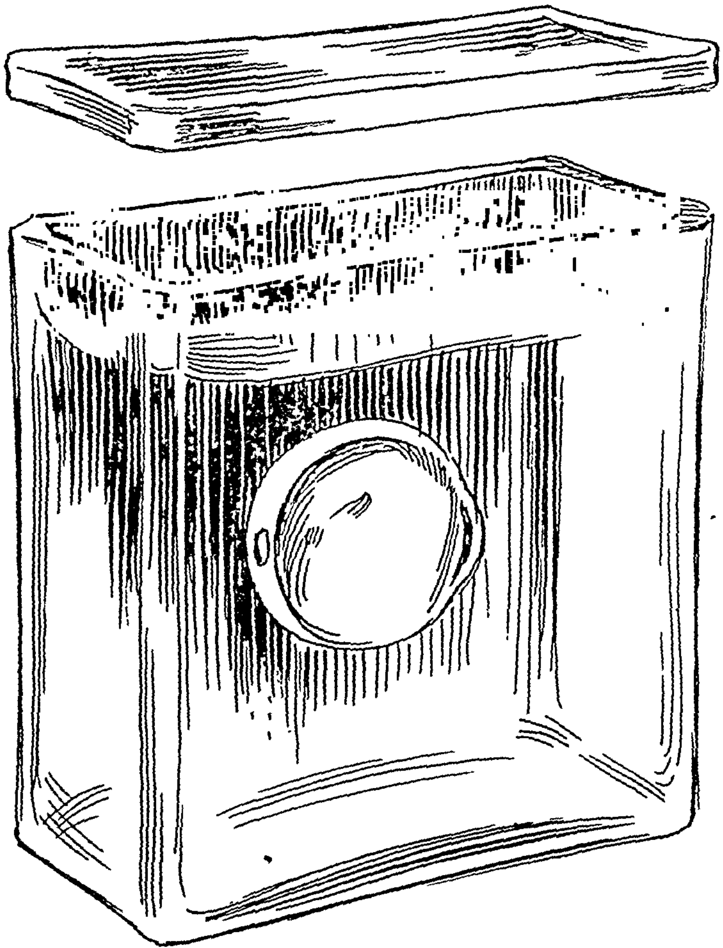

Fig. 7.—Glass jar for mounting macroscopic eye preparations after the Greeff method (E. V. L. Brown).

4. The Greeff mount may be kept on a shelf exposed to the light indefinitely, while any gelatin mass will discolor in time.

5. Eyes preserved in formalin or Kaiserling are easier to embed and section for subsequent microscopic study, should this be at any time desired.

Dr. Edward A. Shumway (William Pepper Laboratory, University of Pennsylvania) uses the gelatin mount, as a rule, when it is desirable to make a macroscopic preparation. The gelatin is made in a rather stronger solution than is usually advised—40 grams of gelatin (Coignet et Cie, France, or Conte Fils, Magdeburg, Germany) to 250 c.c. of water. After solution of the gelatin by careful warming, the white of one egg, beaten up in a small quantity of water, is added to the solution, and the whole poured into an agateware pail. This is then placed in an Arnold sterilizer, and boiled vigorously. In this manner the coagulation of the albumin and the clearing of the gelatin are accomplished without danger of burning the gelatin, a very important point, as the least scorching of the vessel around the top of the gelatin will give a brownish discoloration to the mounting medium. It is then filtered through a good quality of filter paper, preferably in a hot water filter, as the percentage of gelatin is very high, and the solution filters slowly. If it stiffens before filtration is complete, it may be put back into the sterilizer again, in the agate vessel, and reheated. To the filtrate an equal quantity of glycerin (C. P.) is added, and 1 c.c. of a 2 per cent. solution of commercial formalin (making a dilution of about 1/20,000, which is strong enough to prevent the growth of molds, etc.). The cups are furnished by Wall & Ochs, 1716 Chestnut street, Philadelphia. (See Fig. 8.)

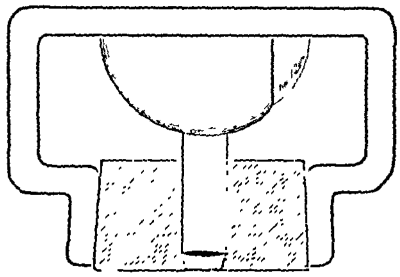

Fig. 8.—Cup, with rounded bases of ebonized wood, for macroscopic specimens.

After the gelatin has hardened over the surface of the specimen in the cup it is exposed to the fumes of strong formalin in a covered glass jar, by means of which the surface is hardened to a depth of one-quarter inch. This prevents melting of the surface gelatin, and if, in addition, the cups are inverted, in warm weather, the specimens will rarely be affected. After 24 hours the specimen is removed and allowed to stand under a covered dish several days, and the water which is squeezed out of the shrinking gelatin in the form of drops, over the surface, is removed by filter paper. The cup is then sealed. For this purpose opal glass is used, as it is much cheaper than the "flashed glass," and affords a

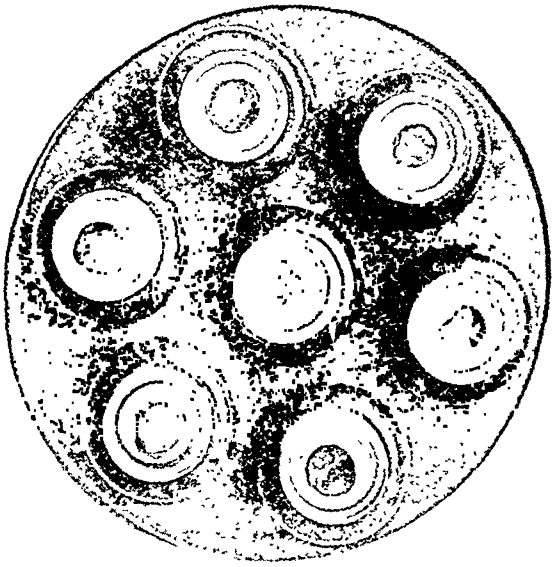

Fig. 9.—A convenient arrangement for exhibition of macroscopic specimens in the class room, or society meeting. It is composed of a round tray of ebonized wood, to which seven of the wooden bases, used for holding the individual specimens, are screwed. It is made by Wall & Ochs, Philadelphia.

better background than transparent glass. The most satisfactory cement I have used is the Imperial Rubber Cement, made by S. C. Moffett, New York, which must be melted in a flame before it is applied, and renders the removal of the disc impossible, unless it is again heated. The danger of evaporation may be further prevented by covering the edge with a ring of asphalt.

Drs. H. V. Wurdemann and Nelson M. Black of Milwaukee report that, in their opinion, the two methods of mounting macroscopic eye specimens which seem to give best satisfaction are the glycerin-jelly and the formalin mounting of Greeff. The former has the advantage of being easier to transport without displacing the specimen, but the gelatin has a tendency to become discolored and the preparation of the mount consumes a great deal of time. The Greeff mounting is much more effective in appearance, is easier to prepare, can be photographed with much better result, and microscopic specimens can be removed from them at any time, but it has the disadvantage of not standing transportation well.

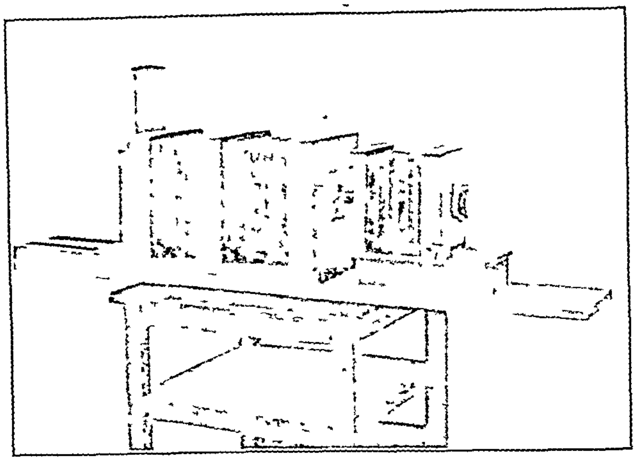

Fig 10.—The Dixon camera for photographing gelatin mounted eye specimens

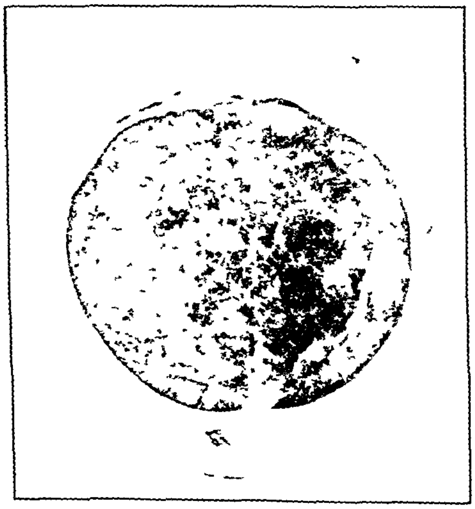

Fig 11.—Secondary hemorrhagic glaucoma (Bull). Photograph

The following method was first described by Wurdemann:[4]

The specimens are first placed in formalin solution (1/10) for 48 hours, then washed with water and hardened in alcohol, beginning with a 33 per cent. solution, remaining a day each in 33, 50, 70 and 80 per cent. solution, respectively, and are kept in the last strength until ready to divide. The eye is then frozen, cut and mounted in glycerin jelly or preserved in a 4 per cent. formalin solution after Greeff's method; or Kaiserling's solution may be used to preserve them in the jar devised by Brown.

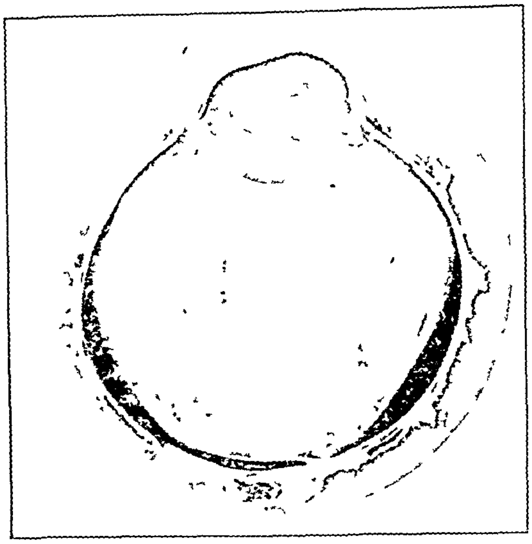

Fig 12.—Anterior staphyloma following ulcer of the cornea (Derby). Photograph of mount

Glycerin jelly is prepared by taking 30 gm. of best gelatin (Gold Label, American; Coignet et Cie, France; or Conte Fils, Germany), adding 240 c.c. of distilled water and heating over a water bath. The whites and shells of two white-shelled eggs, or a small amount of Merck's egg albumin, is added and constantly stirred until the coagulated albumin rises to the top, leaving a clear liquid underneath. Filter through two thicknesses of good filter paper, add an equal volume of C. P. glycerin, 10 c.c. of a 10 per cent. solution of carbolic acid being added to each liter of the jelly to preserve it. The jelly itself is melted by placing the container in hot water, when ready for mounting. The specimens are mounted in small glass jars obtained from Chambers, Inskeep & Co., Chicago. After mounting, the jelly is exposed to the fumes of formalin under a

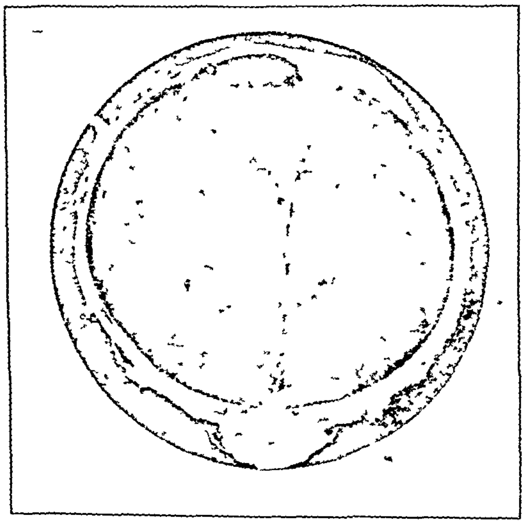

Fig. 13.—Chronic iridochoroiditis following injury twenty years previously (Bull). Photograph of mount

bell-jar for 48 hours. The glass covers are cemented in place with Freese's cementine, Royal or Le Page's liquid glue.

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[4] Annals of Ophthalmology, p. 674, October, 1897.

PHOTOGRAPHING MACROSCOPIC EYE PREPARATIONS.

After an eyeball section has been so successfully preserved and mounted that gross alterations in its tissues are readily distinguished, the question of drawing, photographing or otherwise picturing it naturally arises. Reproduction by photography is, on the whole, the most desirable and most satisfactory method. Dr. George S. Dixon[5] has, among others, discussed its merits as well as its principal difficulties, and, at the request of the committee, has kindly forwarded a number of photographs of gelatin mounts exhibited by him at the New Orleans meeting. Several of these are pictured in the text.

A few trials convinced Dixon that photography of the gelatin-mounted specimens was not as simple as it appeared. The chief obstacle to be overcome was the light reflections from the surface of the glass cup. These produced a good picture of the glass cup, but a very poor one of the mounted specimen. After many experiments it was found that when an ordinary 3½-inch focusing glass, mounted in a metal tube, was placed over the mount, all direct rays from the surface were excluded, while the eye specimen itself was sufficiently illuminated by light entering the glass sides of the cup. Finally an apparatus was devised which Dr. Dixon regards as the best means of obtaining plates of gelatin mounts. As seen in the figure, it consists of a pair of bellows, the anterior, a single one, being smaller than the posterior. The latter is double and carries the lens and plateholder.

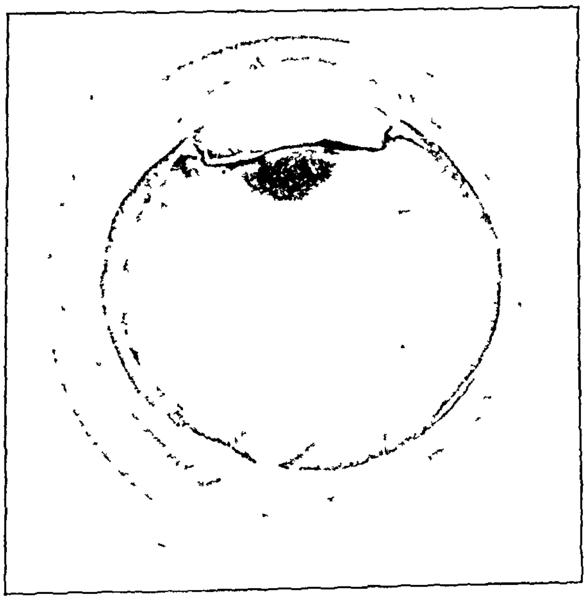

Fig. 14.—Plastic choroiditis (Weeks). Photograph of mount.

This posterior bellows is securely fastened to a baseboard long enough to project considerably beyond the anterior bellows. The baseboard of the anterior bellows is fastened to a couple of cleats sufficiently high to bring the diaphragm at the back and the object in front, in the optical axis of the lens. Two smaller cleats are screwed to the long baseboard in such a manner as to allow the smaller bellows to be moved backward and forward without lateral motion, independent extension of the bellows on its own baseboard being retained.

The anterior bellows is fitted with a sliding front, in the center of which is a diaphragm sufficiently large for all specimens, varying sizes being supplied with interchangeable diaphragms of diameters slightly less than the interior of the macroscopic cup, for the purpose of cutting off the direct rays which would otherwise pass through the rim of the cup. This point is essential. A spring is employed to hold the cup in position. As the front slides, it can be removed from the bellows, the object adjusted as desired, and the whole returned to position, when the specimen will be in the optical axis of the apparatus.

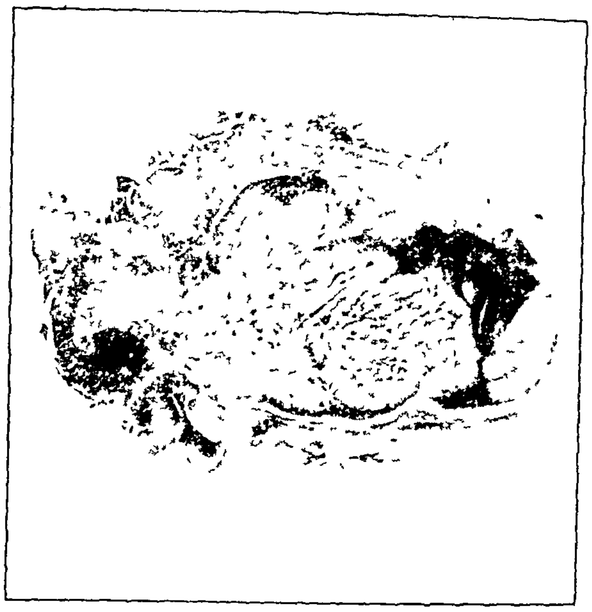

Fig. 15—Melanosarcoma of the choroid (Noyes). Photograph of mount.

The posterior bellows is fitted with a 3¾-inch Gundlach wide-angle lens intended to cover a lantern slide plate, and capable of enlarging an image the size of an eye two diameters with satisfactory detail; an F 32 stop should be employed during exposure.

A wide-angle short-focus Morrison lens, giving an extreme amplification of 2.6 without "breaking," is a trifle more satisfactory, but the Gundlach lens answers the purpose fairly well, as over two diameters is seldom desirable.

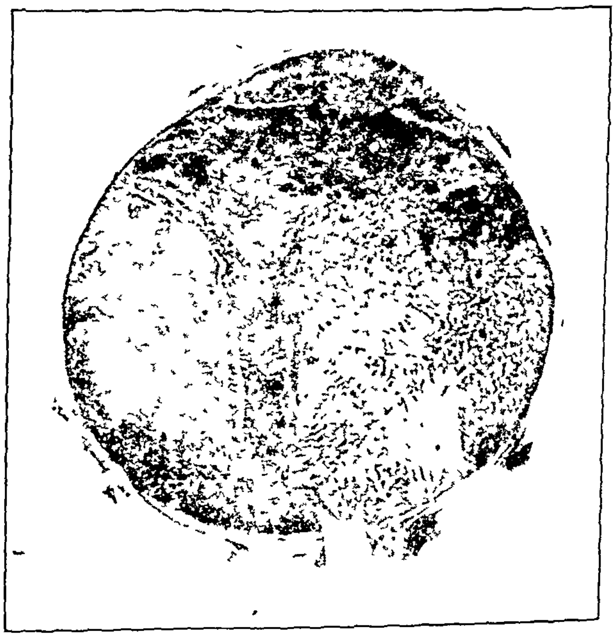

Fig. 16—Melanosarcoma of the eviscerated globe (Hunter). Photograph of mount.

In the early work with this camera, diffused daylight, preferably in the open air, was employed. The camera as it stands in the cut is in position for exposure. It was soon learned, however, that this method would only answer for a limited number of specimens, namely, those presenting a white or a very light substance in the interior of the hemisphere.

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[5] 5. New York Eye and Ear Infirmary Reports, 1889.

Specimens filled with dark tumors, or those in which nothing remained in the interior but retina and choroid, yielded negatives with no detail whatever in the center until the cornea and sclerotic, transparent and white, respectively, were hopelessly over-exposed. To obviate this a white bristol-board truncated cone, with an angle sufficient to throw the rays under the specimen near the center, was placed around the cup, as shown by the dotted lines in the cut. In this instance, instead of diffused daylight, sunlight was reflected into the cone by means of a mirror. Some specimens gave good plates with this method of illumination, but the danger of over-exposing the cornea and sclerotic still remained, and an old difficulty reappeared, namely, the imperfections of the surface of the cup. But the increase in the obliquity of light brought out all the scratches on the surface of the cup, especially if a trifle over-exposed. This in turn was reduced to a minimum by cementing a perfect glass disc to the anterior surface of the cup by means of Canada balsam.

In working with direct sunlight, or the electric arc, it is important to remember that glycerin jelly becomes liquid at a temperature of 105 F.

In many instances the cornea is so transparent, and the sclerotic so white, as to require more contrast than is afforded by the porcelainized glass disc with which our mounts are sealed. This is met by supplying backgrounds made of colored papers such as black, pea-green, a rather dull canary, and neutral gray. Of these, the latter color was most useful. The canary-colored background works well in some cases where it is desirable to "hold back" the sclera, but it is liable to interfere with a transparent cornea.

Color screens have not given any useful results in Dr. Dixon's hands.

On the whole, the most satisfactory plates used were Corbutt's A and B, which require exposures varying from three to twenty-five minutes, depending on the quality of the light, size of stop and character of specimen, as in all other photography.

The method is still imperfect, as will be seen. No single method of illumination yet tried has answered for all specimens, and the color of some is such as to defy all efforts with or without color screens, with different colored backgrounds, with diffused daylight, direct sunlight, or the electric arc.

Other methods are in process of application, the most promising of which is an annular prism at the base of the cup with or without the use of the truncated cone.

TUMORS OF THE CONJUNCTIVA.

ILLUSTRATED BY THE PRESENT EXHIBIT OF MORBID GROWTHS.*

EDWARD ADAMS SHUMWAY, B.S., M.D.
PHILADELPHIA.

In response to the request of the Chairman of your Committee on Exhibit of Pathologic Preparations for a paper on some points in the pathology of the eye, as illustrated by our exhibit of the present year, it occurred to me that it would be well to confine myself within the limits of a comparatively narrow subject, and I have therefore attempted to make a résumé of our knowledge of tumors of the conjunctiva. With this aim in view I have obtained a number of preparations showing the various growths which are found on this membrane, and I desire at this time to express my thanks to the gentlemen who have assisted me by loaning sections and mounted specimens from their collections, especially to Drs. G. E. de Schweinitz, Clarence A. Veasey, William Campbell Posey and L. Webster Fox, of Philadelphia; John E. Weeks, Peter A. Callan, Wilbur Marple, Emil Gruening and Edgar S. Thomson, of New York; Dr. Flemming Carrow, of Ann Arbor, and Dr. Brown Pusey, of Chicago. Many of the cases have already been reported, and others will be published in detail at a later time.

The growths of the conjunctiva are of considerable interest, pathologically, because of their great variety, although they are, relatively speaking, infrequent, and constitute only a small proportion of the cases which we see clinically. The conjunctiva may be the primary seat of the growth, or it may be secondarily involved by extension from the neighboring tissues. I shall limit myself to those tumors which originate primarily in the conjunctiva. They may be divided into two main classes: (*a*) Malignant; (*b*) benign.

The malignant growths are represented by carcinoma and sarcoma. They appear clinically in very much the same forms and in patients usually beyond the fortieth year of life. Their point of predilection is at the corneo-scleral limbus, and it is often impossible to distinguish them, except by microscopic examination. The growth of carcinoma at the limbus has been said to correspond with its occurrence elsewhere in the body at the junction of epithelial surfaces of dissimilar structure. The difference at this point between the conjunctival and corneal epithelium is not marked, however, and the etiologic factor is rather the occurrence of true papillæ in the conjunctiva surrounding the limbus, varying from four to thirteen in number, which, as Nakagawa[1] has recently shown, become deeper in old people, and take on a sudden and enormous growth in beginning carcinoma. The carcinomatous growths appear first as small, pale reddish masses, which have but little tendency to spread inward, both cornea and sclera acting as very resistant checks; so they grow superficially, although rare cases have been described in which there was an inclination to extend inward from the start. In contrast to some of the benign epithelial growths, especially papillomas, they have no tendency to the formation of a pedicle, but possess a broad base, and are closely united to the underlying tissues.

The tumors consist of proliferating masses of epithelial cells, which develop directly from the surface epithelium and are separated into alveoli by a connective tissue stroma which is an extension of the connective tissue of the sclera and cornea. The behavior of the surface epithelium is at once a characteristic difference between carcinoma and sarcoma. In the former it is directly involved, while in the latter it passes smoothly over the surface of the growth, which raises it from the structures beneath as it extends. As a rule, carcinoma grows very slowly, but in some cases it forms large, fungous masses on the surface of the eyeball, the microscopic structure of which resembles papilloma very closely, and the examination of superficial portions of the tumor may lead to a very erroneous diagnosis. If allowed to remain, all of the carcinomas will ultimately perforate the eyeball, usually along the vessels and nerves at their point of penetration through the sclera. In some cases there is a distinct pigmentation of the stroma, so that a number of cases of melanocarcinoma of the corneoscleral limbus have been reported. Panas,[2] in fact, considered melanosarcoma to be the exception and melanocarcinoma to be the rule.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

[1] Nakagawa: Archiv f. Augenheilk., March, 1903.

The question of malignancy is difficult to determine. The rapidity of growth may vary greatly; likewise the involvement of the cornea and sclera. Even superficial growths tend to recur, and while the extension by metastasis is rare, they should be thoroughly removed and the eyeball sacrificed, if it is evidently involved. Our collection shows a number of very good examples of carcinoma—some small and superficial, some showing tall fungous masses, and others extensive infiltration of the cornea and sclera.

SARCOMA.

Sarcoma, like carcinoma, occurs in individuals usually beyond middle life, and most frequently at the corneoscleral limbus. As a rule, the growths are pigmented, the pigment occurring both in the tumor cells, and in the connective tissue stroma, in which the cells are imbedded. As in the case of melanosarcomas of the skin, the conjunctival sarcomas develop chiefly from the pigmented nevi—the so-called pigment spots—on the conjunctiva, and, as Wintersteiner has shown, usually in the area corresponding to the palpebral opening, probably as the result of repeated slight traumatisms. The study of these pigmented nevi, or melanomas, is of importance, therefore, for the correct interpretation of some of the facts concerning sarcomas. Their structure corresponds closely to that of the skin nevi: circumscribed collections of large polygonal cells which are imbedded in a groundwork of subconjunctival tissue. The question as to the origin of these cells has been, and still is, a matter of dispute. On the skin Unna,[3] Kromayer[4] and others have held that they are derived from the surface epithelium, although the direct connection can not always be shown, while Ziegler[5] believes that they are due to the proliferation of the endothelial cells of the lymph vessels. Wintersteiner[6] was unable to find any confirmation of Unna's theory in so far as it related to the conjunctival nevi; on the other hand, as has been mentioned in speaking of carcinoma, Panas[7] long considered that these epibulbar growths were practically all carcinomas, although in a subsequent article he modified his claims and admitted that many were probably alveolar sarcomas, or endotheliomas, and thought that epitheliomas and sarcomas occurred together. In all of the nevi the epithelium is changed, often thinned, but many times it sends processes of cells downward into the tissue. These processes may be replaced by hollow, gland-like tubes, which may be so numerous as to give the growth a glandular or adenomatous appearance—nevus pigmentosus glandulosus. Cysts may often develop from the glandular formations, and may reach a large size and cause the nevus to atrophy by pressure—nevus pigmentosus cysticus. I have been able to secure several good cases of nevus of the conjunctiva, two of them cases studied by Wintersteiner and one loaned by Dr L Webster Fox, in which the overgrowth of the epithelium and the cyst formation are so marked as to overshadow the original growth of nevus.

From these pigment spots the sarcomas develop slowly into soft, vascular growths, which are usually more prominent than the carcinomas, and occasionally possess a pedicle. When they project over the surface of the cornea they are not ordinarily attached to it, but may be lifted away by means of a probe. Laterally, they are more firmly attached to the bulbar conjunctiva, but can usually be moved freely over the surface of the sclera. If they are not removed they continue to grow, and may reach a large size. In the majority of cases the cornea and sclera offer a remarkable resistance to invasion, and very few cases have been reported in which the tumor had invaded the interior of the eye. At times several nodules may appear at the limbus, or secondary nodules may spring up on the lids (Wadsworth and Verhoeff[8]). Recurrence after removal is very frequent, and may take place in the same position, or at a different portion of the limbus. They are commonly said to be less malignant than sarcomas occurring elsewhere, and Panas[7] makes a sharp distinction in this respect between the corneoscleral growths, which he terms "epibulbar," and those occurring at a distance from the limbus, which he calls "peribulbar." Verhoeff and Loring,[9] however, have shown that while the direct involvement of the eyeball is rare, there is a history of recurrence in 81.8 per cent. of the cases in which the patients were subsequently observed, local metastasis in 23 per cent., and general metastasis in 11 per cent. They therefore consider that epibulbar sarcomas are highly malignant, and believe the eyeball should be at once removed, if the patient's consent can be obtained.

Microscopically, the tumor consists of closely packed, spindle-shaped cells, running in definite bundles, or, more frequently, the cells are arranged in distinct alveoli, separated by a connective tissue stroma, and constitute the so-called alveolar sarcoma. In the latter case the cells may be spindle-shaped, but in many they show large, flat forms, which are epithelioid or endothelial in type. The growths are, however, to be distinguished from carcinomas by the absence of any involvement of the surface epithelium. These growths are well represented in the collection of this year. Some possess spindle-shaped cells; others show the epithelioid type.

Primary sarcoma of the conjunctiva of the lids is very rare, although the lid conjunctiva may be involved by implantation or recurrence of an epibulbar growth. Cases of lymphosarcoma of the plica semilunaris and of the fornix have been described as rarities. Lymphoma of the conjunctiva has been found in malignant lymphoma, with general involvement of the lymph glands of the body, and apparently as the first symptom in some instances. Very marked hypertrophy of the adenoid tissue of the conjunctiva, in the transition folds, with the formation of large tumor masses, which may cover the eye and make the opening of the lids difficult, occurs in the condition known as amyloid degeneration of the conjunctiva. Microscopic examination shows, in the beginning stages, great increase of the adenoid cells and the subsequent formation of amorphous masses, which in some instances give the reaction for amyloid, in others for hyaline. Dr. Weeks has loaned a slide which shows amyloid reaction on the surface of such a conjunctival growth, and I am able to exhibit a lymphosarcoma of the transition fold.

Carcinoma and sarcoma occur occasionally as primary growths on the caruncle, and show here much the same characteristics as on the skin surface. Carcinoma has much greater tendency to form "pearly bodies" in this position than on the conjunctiva. A good case of primary carcinoma of the caruncle has been loaned by Dr. de Schweinitz,[10] and one of primary sarcoma by Dr. Veasey.[11]

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[2] Panas: Traité des Maladies des Yeux, Paris, 1894.

[3] Unna: Berlin. klin. Wochenschr., 1893, and Virchow's Archiv, vol. 143, 1896.

[4] Kromayer: Beiträge v. Ziegler, xxii, 1897.

[5] Ziegler: Lehrbuch der Allgemeinen Pathologie und der patholog. Anatomie.

[6] Wintersteiner: Ber. der ophth. Gesellschaft, Heidelberg, 1898, p. 253.

[7] Panas: Archives d'Ophtalmologie, January, 1902.

[8] Wadsworth and Verhoeff: Trans. Am. Ophth. Soc., 1901, p. 274.

[9] Verhoeff and Loring: Archives of Ophthalmology, March, 1903.

The benign growths of the conjunctiva are either congenital or acquired. The congenital forms are sessile, while the acquired forms are usually polypoid in shape, and possess a pedicle. By far the most frequent of the congenital growths are the

DERMOID TUMORS.

Dermoid tumors form flat, dull white growths of firm consistency, usually situated at the corneoscleral junction, on the temporal side, and quite firmly attached to the cornea and sclera. The surface is often dry and may be covered with fine hairs, or, more rarely, with a few long hairs which irritate the eye by their presence. Microscopically, they represent small islands of skin. The epithelium is thickened, cutaneous in character, and covers a mass composed of dense connective tissue, in which hair bulbs, sebaceous glands and sweat glands may be imbedded. Frequently associated with other congenital anomalies, such as coloboma of the lid, they may take on a sudden, rapid growth in later life, and should be carefully removed. Most of the later writers assume a temporary attachment of the amnion to the eyeball during fetal life as the explanation of their origin. A number of such growths are included in the collection.

LIPOMA.

More rarely, subconjunctival lipomas occur beneath the bulbar conjunctiva. They appear as yellowish masses, situated generally in the outer angle of the eye, between the insertions of the external and superior rectus. Microscopically, they consist of lobules of fat, sometimes associated with considerable fibrous tissue. They frequently contain gland tissue, and as they are congenital, may be more properly termed dermolipomas. Some authors have contended that teratoid elements are always present, although they are easily overlooked. A number of cases, however, have been carefully studied in serial sections, and have proved to be pure lipomas. Occasionally they grow to a considerable size at puberty. They can be removed without difficulty, and show no tendency to recur. Two of these growths have been secured.

OSTEOMA.

As rare congenital tumors, about twelve cases of subconjunctival osteoma have been reported. These have been situated usually in the supero-external portion of the eyeball, which is also the position in which the lipomas are most frequently found. They represent small pieces of true osseous tissue, with lacunæ, bone corpuscles, etc., and are best explained as the result of a temporary adhesion of the amnion to the eyeball, and the subsequent development of bone in the tissue thus formed. They are illustrated by one specimen.

Lymphangiomas and telangiectasias have also been described as very rare congenital growths.

The acquired forms of benign growths are, in the majority of cases, polypoid in form. In the older textbooks all tumors of the conjunctiva which had a distinct pedicle were called polyps. Under this term, however, many different forms were included, and we now know that both soft and hard fibroma, adenoma, papilloma, granuloma, angiosarcoma, and even tubercular conditions, may assume a polypoid appearance, as a result, probably, of the constant movements of the eyelids. As Elschnig[12] states, true polyps, in the strict anatomic sense of the term, i. e., hyperplastic growths of circumscribed portions of the conjunctiva, which include all of its elements, such as are found in the nose, esophagus, intestines, etc., have never been described on the conjunctiva. The term polyp, however, is used by many writers to describe also the soft, edematous fibromas or fibromyxomas which occur in the nose, and although it would seem best, as Axenfeld[13] says, to drop the term altogether, if we are to use an anatomic classification, such good authorities as Fuchs[14] and Panas[2] make a separate class of polyps, and the name may be retained and used to designate the fibromas of the conjunctiva.

FIBROMA.

Fibromas are represented by two forms, soft and hard. The soft fibromas occur chiefly in the fornix, or in the palpebral conjunctiva, grow quite rapidly and possess long pedicles. They are composed of parallel bundles of spindle cells in a finely fibrillar tissue, and often contain many blood vessels. The presence of these vessels is the cause of a characteristic symptom that is often observed in connection with the soft fibromas, viz., severe bleeding on the slightest traumatism. Removal and cauterization of the base with nitrate of silver, or with the actual cautery, usually prevent any recurrence. Less frequent are the hard fibromas, which arise chiefly from the palpebral conjunctiva and from the caruncle. Their surface is smooth and covered with a thin layer of epithelium. The histologic structure is that of fibrous connective tissue, with comparatively few cells and blood vessels. They cause no inconvenience unless large, and when removed have no tendency to recur.

GRANULOMA.

Quite closely related to the soft fibromas are the granulomas which develop in places where a superficial loss of conjunctival tissue has existed, most frequently after tenotomies and enucleations, and also after rupture of chalazia on the internal surface of the lid. They are composed of naked masses of pure granulation tissue: closely packed polynuclear cells in a fine reticulum, which contain numerous capillary blood vessels. There is no epithelial covering, and the little growths may be snipped off, or, if left alone, will finally be constricted off by the contraction of the conjunctival tissue surrounding their base.

The fibromas must also be distinguished from the small growths on the tarsal conjunctiva and about the limbus in spring catarrh. These present themselves in the form of broad, flattened papillæ, which have been likened to paving stones, and while they can not strictly be included among tumors of the conjunctiva, as they occur in the course of an inflammatory process and disappear without leaving any trace, they nevertheless resemble the fibromas very closely in their histologic structure. They consist of dense fibrous connective tissue, the fibers of which may show a peculiar glassy degeneration, and are covered with a thickened layer of epithelium, which, especially in the circumcorneal growths, shows a marked tendency to send invaginating processes of cells into the depth of the tissue, so that the appearance is very similar to that found in cancroid.

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[10] de Schweinitz: Trans. Am. Ophth. Soc., 1898, p. 324.

[11] Veasey: Archives of Ophthalmology, xxvi, No. 2, 1897.

[12] Elschnig: Archiv f. Augenheilk., vol. xix, 1889, p. 64.

[13] Axenfeld: Ergebnisse der allg. Path. u. patholog. Anatomie von Lubarsch-Ostertag, vol. ii, p. 38.

[14] Fuchs: Lehrbuch der Augenheilk., 7th ed., p. 140.

Fibromas are represented by sections loaned by Drs. Weeks and Thomson. There are a number of sections of granuloma, and Drs. Posey and de Schweinitz have sent sections of tarsal growths in spring catarrh.

PAPILLOMA.

Another form of polypoid tumor of still greater importance is papilloma, or papillary fibroma. Elschnig,[12] in his very excellent article, stated that this was comparatively infrequent, but the subsequent papers by S. Fuchs,[15] Wagenmann,[16] Lagrange,[17] Zimmermann,[18] Grunert,[19] Kopetzky von Rechtperg[20] and others have shown that they are among the most common tumors of the conjunctiva. They form small growths, which may be distinguished clinically from the fibromas by the fact that their surface is not smooth, but is covered with tiny papillæ, like the surface of a raspberry. Frequently multiple, they occur chiefly in the neighborhood of the caruncle and semilunar fold, but also on the tarsal and bulbar conjunctiva, and unless removed very thoroughly show a decided tendency to recur. They are composed of branching papillæ of connective tissue, surrounded by thick mantles of epithelial cells, the preponderance of the epithelial cells showing that it is essentially an epithelial proliferation with which we have to deal. The connective tissue may be so little developed that the epithelial cells are found almost in contact with the walls of the capillary vessels. At times they are low and wart-like, at others they show long, villous processes and have a structure resembling a cluster of feathers. The latter appearance is well shown in two cases in the collection—one a case reported by Ayres of Cincinnati, and one obtained from Mr. Treacher Collins in London. When the papilloma originates on the caruncle, the surface epithelium partakes more of the character of skin epithelium, while on the conjunctiva it frequently contains numerous goblet cells. A number of very excellent specimens in the collection testify to the comparative frequency of the growth. The question as to their malignancy is often difficult to determine. When situated on the conjunctiva near the limbus they may be mistaken for an early stage of carcinoma, but on the other hand, while usually benign, they do unquestionably show at times a tendency to undergo carcinomatous degeneration and involve the tissues of the eyeball and lid, as cases by Horner,[21] Lagrange and Mazet,[22] Kopetzky von Rechtperg[20] and Risley and Shumway[23] have shown. Their removal should therefore be complete.

ADENOMA.

Adenomas occur occasionally on the eyeball, in the neighborhood of the caruncle, as pale red, isolated tumors, which may possess a pedicle or have a broad attachment. Only five cases have been reported, four of which have had their origin on the caruncle itself, arising from the tubular gland in this position, as in Veasey's[24] case, sections of which he has loaned, while Schirmer's[25] case on the semilunar fold probably developed from a misplaced gland, as there is normally no glandular tissue in this position. On the conjunctival surface of the lids, adenomas have been found originating in Krause's glands, at the border of the tarsal cartilage in the meibomian glands, and in the modified sweat glands of Moll. At times they show by their rapid growth and involvement of the surrounding structures that they are essentially malignant, or adenocarcinomas. The greater number of such cases originate in the meibomian glands, and show alveoli of large epithelial cells, which degenerate quickly and form large, poorly-staining masses in the center of the alveoli, as illustrated by two cases in the exhibit, one of which was loaned by Dr. Thomson of New York. Of course, these growths are not really conjunctival tumors, but since they may appear as tumors on the conjunctival surface of the lid, they must be mentioned for the purpose of differential diagnosis.

HEMANGIOMA.

Fifty-two cases of hemangioma have been collected by Pergens.[26] They consist of newly-formed capillary vessels, and should be sharply distinguished from varices and aneurisms. If they contain much fibrous tissue they may be termed angiofibromas, and are then closely related to the vascular fibromas. They may be congenital or develop in later life, and occur as primary growths on the palpebral conjunctiva, in the fornix, on the bulbar conjunctiva and plica semilunaris, as round, polypoid and occasionally sausage-shaped growths, the surface of which is sometimes smooth and sometimes nodular. They may remain stationary; at times they grow slowly, at others rapidly, without any apparent cause. When combined with sarcoma, the angiomatous formation is of secondary importance, and their course depends on the sarcomatous character of the tumor. Their histologic structure consists of twisted capillary vessels, which may also be dilated. If large blood cavities are present, we have cavernous angiomas, which are more rare. In their treatment the best results have been obtained by excision.

CYSTS.

Finally, as comparatively rare forms of new growths, we have the cysts of the conjunctiva. These develop in three chief places: on the bulbar conjunctiva, in the fornix and on the palpebral conjunctiva, in the form of transparent vesicles filled with a clear, serous fluid. Those of the bulbar conjunctiva represent usually small dilatations of the lymph vessels, and are hence lymphangiectasias or lymphangiomas. They occur in the neighborhood of the cornea, and are generally multiple, like strings of small, transparent pearls. Sometimes they communicate with each other, and more rarely they form isolated, yellowish cysts, which, however, remain comparatively small, and are thus to be differentiated from the cysts which originate in the conjunctival glands. Very rarely cysts on the bulbar conjunctiva develop from invaginated processes of epithelial cells. These processes, first described by Henle[27] and later by Iwanoff[28] as true glands of the conjunctiva, and known as Henle's glands, are now considered to be, as a rule, folds of the conjunctiva which are lined with epithelium. They are very frequent in chronic catarrh, and especially in trachoma. If the opening of these minute gland-like depressions becomes closed, there may be retention of the secretion from the cells and the formation of cysts. Cysts also originate in the head of the pterygia, by the same process of invagination of the surface epithelium, and subsequent isolation of the cells from the surface. A few cases have been reported of the introduction by

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15. S. Fuchs: Archiv f. Augenheilk., vol. xx, 1889.
16. Wagenmann: v. Graefe's Archiv, vol. xl, p. 2, 1894.
17. Lagrange: Archives d'Opht., April, 1899.
18. Zimmermann: Klin. Monatsbl. f. Augenheilk., vol. xxxii, 1894, p. 371.
19. Grunert: Klin. Monatsbl. f. Augenheilk., April, 1899.
20. Kopetzky v Rechtperg: v. Graefe's Archiv, vol. li, p. 115.
21. Horner: Zehender's Monatsbl. f. Augenheilk., vol. ix, 1871.
22. Lagrange and Mazet: Annales d'Oculistique, vol. cxix, 1898.
23. Risley and Shumway: Annals of Ophthalmology, July, 1901.
24. Veasey: Annals of Ophthalmology, July, 1902.
25. Schirmer: v. Graefe's Archiv, vol. xxxvii, i, p. 218
26. Pergens: Klin. Monatsbl. f. Augenheilk., vol. xxxix, January, 1901.
27. Henle: Handbuch der Eingeweidelehre des Menschen.
28. Iwanoff: Heidelberger ophthalm. Gesellschaft, 1878.

traumatism of epithelial portions of the skin, cilia, etc., beneath the conjunctiva and the formation of cysts from these included particles.

Cysts of the fornix may arise from the so-called Henle glands, and less frequently from the accessory lachrymal glands, or glands of Krause, in this position. The excretory ducts of these glands, forty-two or more in number, in the upper lid, and from two to six in the lower lid, may be closed by chronic inflammatory processes, and the retained secretion then widens out the ducts into cysts, which may reach considerable size, in contrast to the lymphatic cysts of the bulbar conjunctiva. When the cysts originate in Krause's glands some of the acini of the gland will usually be found in the neighborhood of the cyst, but this is not always the case, and as their size, position and contents are not diagnostic, the determination of their origin may be very difficult.

From these glandular cysts must be distinguished those due to the presence of the cysticercus. These occur in early life, and constitute, according to Ballaban's statistics, one-sixth of the number of cases of ocular cysticercus. They occur frequently as quite large, pale red, or more often whitish or yellowish vesicles, which are usually movable, but are occasionally attached firmly to the sclera, or to an eye muscle. If the wall of the cyst is thin, the embryo may be seen as a white spot within. Histologically, the wall of the cyst is composed of a thick connective tissue capsule lined with several layers of young cells, and the surrounding conjunctiva shows evidences of reaction due to the presence of the foreign body. Within the cyst wall is the characteristic cysticercus bladder projecting from one side. In the glandular cysts, on the other hand, the wall of the cyst is composed of a single, or at most, a double, layer of epithelial cells.

The cysts from the glands of Henle are quite frequent, both in the transition folds and in the palpebral conjunctiva in chronic catarrh, and in trachoma. They have been studied of late, especially by Fuchs[29] and Wintersteiner,[30] who have described concretions within the cysts, which arise either from the altered secretions of the cells lining the cyst walls, or from conglomerated masses of the dead cells themselves. Fuchs believes that in some cases the concrements are masses of actinomycetic threads. The collection contains the section of a large epithelial cyst of the upper fornix, one of subconjunctival cysticercus, and a very good example of cyst formation in old trachoma, with concrements within the cyst cavity.

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[29] Fuchs: v. Graefe's Archiv, vol. xlvi, 1, p. 103.

[30] Wintersteiner: v. Graefe's Archiv, vol. xlvi, 2, p. 324.

Good Lay Advice to Young Physicians.—If your patients were all reasonable men and women, your task would be easy; but they are not. Even in their best estate they are not all reasonable men and women, and you will have to deal with them when they are not in their best estate, but are morbid. You will have to deal with patients who throw your medicine out of the window, and still expect you to cure them; in one house with a mother busy with other things and careless of the sick child; in another house with a mother whose weak and tearful sympathy does much to negative the influence of your presence and the effect of your medicines. It is not enough for you to know physiology and anatomy and therapeutics; not enough for you to know what your medical school has told you; you must know men and women—their physical constitutions, their mental and moral constitutions. You must understand them—their life, their narrownesses, their prejudices, their unreasonablenesses. You must see into them, that you may minister to them.—*The Outlook.*

PARAFFIN INJECTED SUBCUTANEOUSLY FOR THE CORRECTION OF NASAL AND OTHER DEFORMITIES.*

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HISTORY.

"To Dr. J. Leonard Corning of New York belongs the credit of first experimenting along the lines of subcutaneous injection of oils"; and, although applied to an entirely different purpose to that which paraffin is now devoted, yet of much import, since it was demonstrated that sterilized oils could be used subcutaneously, without resultant inflammation. Following this same idea, directed in a different channel, Gersuny of Vienna, in 1900, published an article stating that melted vaselin, when injected into a yielding tissue, forms a small tumor which remains *in situ,* causing no appreciable reaction. He used this method to overcome the deformity resulting from castration, blemishes due to cavities, depressed scars, and also for narrowing orifices.

Drs. Lynch and Heath appear to be the pioneers in America in the use of subcutaneous injection of paraffin for the correction of nasal deformities.

In 1901, I began a series of investigations on the cadaver to ascertain the action of paraffin beneath the skin. Before injecting the paraffin the temperature of the tissues was raised to 99 F., by hot applications, then I injected beneath the skin, on the dorsum of the nose, an amount of paraffin varying from a half to two drams, without exerting any restraining pressure on adjacent tissues. I found that small injections of the paraffin would remain *in situ,* and assume the conformity of the solid parts over which it was injected; but when the larger quantities were used, a portion would force its way into the soft tissues at the inner canthus of the eyes and along the course of the angular veins. This could be prevented by pressure over these areas. It was also demonstrated that an intimate adherence exists between the skin and the lateral cartilages at the tip of the nose, and hence was noted the importance of liberating the tissues between the skin and cartilages at this point before injecting the paraffin in the living subject. Later I injected melted paraffin into the back, ears and nose of a rabbit, without anesthesia, and with slight apparent pain to the animal. Ten days later, the examination of the tissues around the injected paraffin gave no evidence of acute inflammation. There had been some attempt on the part of the tissues to encapsulate the injected mass, but the paraffin itself had undergone no obvious change. Later another injection was made into the peritoneal cavity of a rabbit, and after a 22 days' period the animal was killed. Here no evidence of inflammation was present—not even the formation of adhesions. The mass had moved about the peritoneal cavity and become rounded in shape, and had finally lodged between the liver and diaphragm. From this I concluded that paraffin must be inert if injected into the tissues under proper surgical precautions. The paraffin used in these cases melted at 110 F.

Dr. A. E. Comstock[1] of St. Paul, Minn., has described the results of his experiments with rabbits along the pathologic line of injected paraffin. He demonstrated the changes in the tissue after injections varying from

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Laryngology and Otology, and approved for publication by the Executive Committee: Drs. George L. Richards, O. Joachim and G. V. Woollen.

[1] On Paraffin, New York Medical Record, Nov. 1, 1902.

2 to 16 weeks, having used paraffin with melting points from 102 to 112 F. In all cases where paraffin was used with a melting point of 102 F., the animal died within 2 weeks from thrombosis. The best results were obtained with paraffin with the higher melting points. From his very careful investigations, he finds that the harder paraffins are not truly encapsulated in the tissues, but become a part of the new tissue. This theory is further borne out by Walker Downie, who injected paraffin into a carcinomatous breast which was subsequently removed, and microscopic sections made and examined.

DEFORMITIES MOST FREQUENTLY PRESENTED FOR CORRECTION BY INJECTION OF PARAFFIN.

1. Saddleback noses.
2. Depressed scars from mastoid operations.
3. Depressed scars from frontal sinus operations.
4. Depressed scars from traumatic injuries.
5. Smallpox pits.

The saddleback nose occupies the most prominent place in this category, and is the one toward which our attention, as specialists, is most generally directed. The causes of saddleback noses may be mentioned in the following order of frequency, according to my experience: 1, Traumatism; 2, syphilis; 3, heredity; 4, abscess; 5, lupus; 6, scrofula.

At least 50 per cent. of my cases have been caused by traumatism.

ADVANTAGES AND DANGERS.

The advantages to be gained by *subcutaneous injection* of paraffin over any surgical procedure are:

1. The deformity is corrected without a resulting scar, provided no slough or abscess follows, which is a sequence of surgical uncleanliness or hyperinjection.
2. A 2 to 4 per cent. solution of cocain is all the anesthetic necessary, and completely overcomes the pain of inserting the needle, which is all that attends the operation.
3. The slight reaction following the injection is temporary, and the patient may resume his daily pursuits in 12 hours.
4. The results, when proper care has been exercised, are pleasing alike to patient and operator.

The possible dangers that may result are:

1. Abscess or slough, due to either infection or hyperinjection.
2. Embolism.
3. Deformity from hyperinjection.

The first may be obviated by surgical care, and proper attention to the quantity of paraffin injected, so as not to cut off the blood supply to that area.

Embolism is avoided by injecting the paraffin in a semisolid form, and deformity from hyperinjection is entirely under the control of the operator when using a syringe operated by screw force. This last danger is the only one ever coming under my personal observation, and it resulted then from using a piston syringe.

INSTRUMENTS DEVISED FOR INJECTION.

When the injections of paraffin were begun, it was a far more difficult matter to accomplish the desired result than at present. The most potent difficulty was in the syringe. An ordinary serum syringe or an aspirating syringe was all the armamentarium at hand, and the rapidity of action necessary before the hardening of the paraffin in the needle took place, was sometimes detrimental to a good result. This objection was soon obvious, and experiments were made on a syringe which would relieve the necessity for haste. As the dangers of emboli had been harped on by many, I undertook to devise a syringe by which paraffin could be injected in a semisolid form, and to put at rest all the accusations against the advisability of injecting liquid paraffin into the tissues. After a time I succeeded in designing one that would eject paraffin from its needle in a semisolid form, and without the necessity for haste. The syringe which I have devised and here present is thus described: It consists of a metal barrel of 90 minims capacity, and is constructed with a large diameter and short axis, so that dexterity in its manipulation will not be lost by the distance of the hand introducing the needle from the point of introduction. The needle is also short for the same reason, and is just larger than a hypodermic needle. The piston and all other parts *being of metal, obviates the necessity of washers*, and thereby renders it more capable of sterilization, lessening the danger of sepsis. The piston rod is graduated in minims, and is surrounded by a course screw worm. Fitted on this rod is a metal thumb screw, which runs up and down, and is made to screw into the upper end of the cylinder at the volition of the operator. When this thumb screw is not fitted into the cylinder the piston works up and down as in any other syringe, and any liquid can be drawn up and expelled readily by manipulation of the piston; but when the thumb screw is put into place, it becomes necessary then to screw the piston down, and by so doing the paraffin is slowly ejected from the needle. When the paraffin is semisolid, it winds out from the needle in a thin cylindrical thread, but with sufficient force to uplift any tissues not held down by fibrous adhesions. In performing the injection slowly, in this way, ample time is allowed for molding and smoothing the injected paraffin, and the danger of hyperinjection is minimized. The simple mechanical devise which renders the syringe so effective places it at the disposal of any operator, and renders it both portable and free from arrangement other than sterilization.

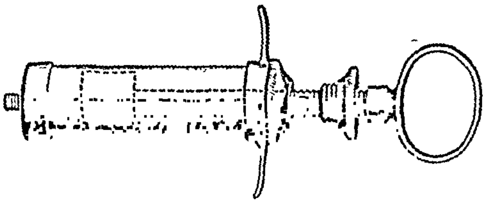

Fig. 1.—The author's syringe.

PARAFFIN EMPLOYED AND ITS METHOD OF PREPARATION.

In my experience, the best results follow the use of a paraffin with a melting point of 110 F. This is not a pure paraffin, but is a mechanical mixture of commercial paraffin, melting at about 120 F., and the addition of petroleum jelly sufficient to bring the melting point down to 110 F. This quantity has to be estimated somewhat carefully, and can not be stated in definite proportions. I have found that while one corner of a plate of paraffin will melt at 120 F., the other will melt at 140 F., so that in having it prepared for use, the chemist makes up a large quantity each time. The melting point must be accurately determined. Test tubes of one-half ounce capacity are filled with the liquid substance, sealed with wax and placed on a sand bath where the temperature is raised to 300 F., thus insuring sterilization.

PREPARATION OF FIELD OF OPERATION AND INSTRUMENTS.

Ordinary surgical technic is all that is to be observed; my routine at the Manhattan Eye and Ear Hospital, where I have performed most of the operations, and at the office, has been as follows:

1. Scrub the field of operation with green soap and water.
2. Apply alcohol freely.
3. Wipe off with bichlorid solution of 1 to 5000.
4. Pour on a little ether.

The syringe and needle are boiled and then allowed to cool sufficiently for easy manipulation, and the hands are surgically cleansed. At the point of entrance of the needle I usually inject into the epithelial layer of the skin only three to four minims of a 4 per cent. solution of cocain. I believe this does no harm to the tissues, nor is it misleading as to the quantity of paraffin necessary to overcome the deformity, if the solution is just at the point of the needle's entrance into the skin and not beneath it. Some operators prefer a weaker solution. I have in several instances injected the paraffin without any anesthetic, and with but slight pain to the patient, and that only on entrance of the needle. Paget and Walker Downie both use a general anesthetic; but, to my mind, this adds an unnecessary element of danger far greater than the operation itself. To insure still further the sterilization of the paraffin, I have devised a tin receptacle supported on an attached tripod, which raises the bottom an inch from any plane surface on which placed, and closed with a detachable lid. This arrangement prevents the paraffin from burning and browning. Into this I pour the paraffin, from the test tube, after melting, and place this receptacle into a sterilizer, or any ordinary boiler—surround it almost entirely with water and boil. After I have boiled it for a few minutes, I remove the receptacle and permit it to cool until the paraffin therein is about 120 F. I then draw it up into the syringe which has been sterilized in the same boiler with the paraffin. When sufficient is withdrawn, I evacuate the air bubbles from the syringe by pressing the piston upward, and run my set screw into place. Some two or three minutes are now allowed for the paraffin to assume equal consistency throughout and to cool down to a semisolid state. This may be expedited by placing the syringe in a bowl of sterilized water at 80 F.

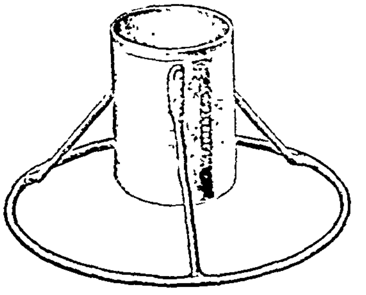

Fig. 2.—The paraffin sterilizer.

Before beginning my injection, I warm the needle of the syringe in some hot sterilized, or even boiling, water, to soften the paraffin which has formed a hard plug in it. This prevents the paraffin from running back of the metal piston, or, as happened in one instance brought to my notice, bursting the needle, when too great force is exerted by means of the screw attachment. Should the paraffin come out in little interrupted spurts of a too liquid nature when the piston rod is revolved, I again cool, warm the needle as before, and continue this routine until the paraffin is ejected in a thin cylindrical thread, easily moldable, and quite impossible of forming an embolus. When the paraffin reaches this consistency it may be kept many hours ready for use, at the temperature of the room, if only the precaution to warm the needle is taken each time before attempting the injection. When this condition is reached, I insert the needle beneath the skin, but above the periosteum, carrying its point slightly beyond the deformity and begin to inject; having the assistant exercise pressure on the soft tissues at inner canthi and on the region of soft tissue at the junction of the nose and forehead. Supporting the syringe with one hand, I mold and smooth the injected paraffin to the requirements of the case, only injecting small quantities at a time, and exercising the greatest care to prevent injecting too much.

In most cases I overcome the deformity at the first injection, but it is by no means advocated, as a rule, and some of the best results have followed three injections. After the first few minims have been injected, I gradually withdraw the needle, making slight additions to the original quantity, and taking every care to mold and smooth the surface, so as to leave the overlying tissues perfectly even.

After withdrawing the needle, I spray the part with ether, which almost immediately hardens the paraffin and insures a better result. The point of entrance of the needle is sealed with collodion and the patient instructed to apply ice cloths for twelve to twenty-four hours. A slight redness generally ensues, somewhat commensurate—in inverse ratio—with the faithfulness with which ice cloths have been kept on. This redness has lasted for a week or ten days in some of my cases, but eventually all disappeared under the application of a 25 per cent. solution of ichthyol.

When the second injection is necessary, I have the patient return in one week, but where circumstances make earlier attention desirable I have not hesitated to make it in three days after the first. The quantity requisite for correcting even a most marked deformity is very small. A dram of paraffin under the skin produces a most astonishing effect, and I believe that, in most instances, a small fraction of a dram is all that is requisite for overcoming ordinary deformities. Since using my syringe, where it can be accurately ascertained just how much is injected, my computations have materially diminished, and I find fifteen to thirty minims is the average amount of injection. Gersuny once injected two ounces in the correction of a deformity of the chest, which represents the maximum amount yet reported. Jukuff found in animals that unpleasant and fatal results occurred only when one-tenth of the bodily weight was used, and in cases where the melting point was below the bodily temperature. From this we may conclude that at present there is no danger to life in the correction of any known deformity. The results obtained are uniformly good, with here and there an unfortunate necrosis, a hyperinjection, or a misplacement, which complications can all be avoided.

CAUSES OF NECROSIS.

1. Surgical uncleanliness.
2. Too much pressure, cutting off blood supply to the part.
3. Injection into the skin and not beneath it.
4. Constitutional disease of patient, as diabetes or Bright's disease.

The hyperinjection may be avoided by the use of syringe, as described, where absolute control of every minim is under the guidance of the operator, and by a little conservatism in attempting to correct the entire deformity at one sitting. The misplacement or lodgement in neighboring parts not intended for the injection, is again the result of a piston syringe, where the needle becomes plugged with paraffin harder than that in the syringe, and on exerting more force this is violently ejected and followed by a volume of liquid paraffin which shoots everywhere beneath the skin and is beyond the control of the assistant or any mechanical device. The most humiliating result is one from hyperinjection or misplacement. The chemical agent that will dissolve out an overplus of paraffin through the skin is not yet within our ken. I have not only been consulted by many unfortunates from other operators' hands, but had a similar result from the use of an aspirating syringe in one of my own cases. An attempt to curette this overplus away through a subcutaneous opening was far from successful. Since then I have obtained better results by cutting away the loose tissue in which the paraffin was imbedded. In one case sent me for correction this method was entirely satisfactory. Here the paraffin had even extended into the soft tissues of the upper eyelid, and its removal occasioned considerable tumefaction, lasting some days. I have never observed any absorption to have taken place in any of my cases, and it has now been two years since the first were begun. No unusual sensations occur over the injected part, except that of numbness immediately following the injection.

Paraffin has been largely employed abroad in filling in the excess of nasal space resulting from atrophic rhinitis. I can not advocate this until further demonstration proves its utility.

SOME OTHER SURGICAL USES OF PARAFFIN.

1. To overcome incontinence of urine.
2. To diminish size of hernial openings.
3. To replace testicles.
4. To cover stumps of amputated bones, preventing wear through flaps.
5. To prevent adhesions in ankylosed joints after first breaking them up.
6. To form plate in trephined skull, preventing dura from adhering.
7. To fill in malformations around neck and in attenuated mammæ.

Case 1.—W. J. H. No specific history. Injury due to horse's kick when a boy. The nasal bones fractured, septum crumpled and bridge entirely flattened, so that the area between the eyes was entirely flat. In addition a heavy scar ran transversely across this space, from the distal extremity of the right nasal bone to the inner canthus of the left eye. I hesitated at first to attempt operating, but finally decided to do so—aiding the operation by loosening the scar tissue with a spear-headed paracentesis knife subcutaneously inserted. The entrance was perfected under cocain near the tip of the nose, and then carried beneath the skin to the binding scar tissue which I liberated in small quantities. At the same point of entrance I inserted the paraffin needle and followed the line of incision. I raised the tissues quite perceptibly, and no unfavorable results obtained.

Two weeks later I began the same performance, making entrance over the nasal spine. This likewise resulted favorably. A good part of the deformity was now overcome, but I concluded to perfect the operation by a third injection. This time I went in at a point midway between the inner canthus of the left eye and my second incision. In liberating the scar tissue this time I cut too close to the surface, and when I injected the paraffin I noticed the white fibrous tissue was considerably stretched. A few days later the paraffin had worn through a small opening, and the most of the last injection worked out; but either sufficient remained, or new tissue formed to overcome the deformity to the satisfaction of the patient, so that I have not attempted further interference.

Case 2.—Injury traumatic, operation Oct. 30, 1902. Cocain anesthesia. One injection only was made. Method pursued same as that advocated in paper. Result entirely satisfactory.

44 West Forty-ninth street.

DISCUSSION.

Dr. O. Joachim, New Orleans—I can support the statements at the end of the paper. In my experience, which is not as large as the Doctor's, I have met the difficulties cited by him in the use of the plain piston syringe. I have seen a case in which there is an objectionable amount of paraffin lodged in the space the Doctor pointed out above the nasal bones. It was due to the paraffin becoming hard and in injecting with some force to overcome the obstructing mass too much was injected. I shall take it out later surgically. The study of this subject has shown that the paraffin of higher melting point becomes encapsulated and the softer paraffin of lower melting point becomes permeated by fibrous tissue. The paraffin I use melts at 104 to 106 degrees. The procedure is a simple one, and to those with a surgical inclination there should be no difficulty in overcoming any abnormality in the shape of the nose or depressed scar after a mastoid operation or after a frontal sinus operation.

Dr. J. F. Barnhill, Indianapolis—Dr. Smith spoke of instances in which injections over the cartilages need to take place and referred to dissecting the cartilage from the skin. I should like to ask the method of doing this. I should think the same thing would be necessary when injecting under scar tissue.

Dr. Harmon Smith—At the tip of the nose, where the skin is adherent, I simply swing the point of the needle around under the skin. In other cases it may be necessary to use a small tenotomy knife to relieve the adhesions.

Dr. Robert C. Myles, New York—Those of us who have used the old syringe have had great difficulty in controlling the injections when the paraffin was in a more or less liquid state. My cases have been troubled more with redness of the nose than his seem to have been. He takes it away with ichthyol, but I have not always been so fortunate. I had one man develop red streaks. The pressure of the paraffin on the veins and arteries seems to obstruct them and they become more or less enlarged.

Dr. C. M. Cobb, Boston—One point that the essayist simply alluded to is the fact that sometimes the skin turns white during the process of the injection. It has alarmed me to see the skin become markedly pale and I have stopped the injection and massaged the skin and then done nothing more for a few weeks. I had one patient with a very satisfactory result, except that the nose was somewhat red. That was more than a year ago and it is somewhat red yet. Peroxid of hydrogen relieves the redness temporarily. Alcohol did him no good. The mixture of clay, bismuth, etc., put on the market under various names, put on at night, did some good.

Dr. E. Fletcher Ingals, Chicago—Would it not be possible to melt the paraffin after injection without injury to the skin? I do not know the highest temperature the skin will tolerate, but I do know it will tolerate at least 113 F., possibly more. I should like to know what temperature could be safely borne. If this could be done we might melt the paraffin and withdraw any excess by an aspirating syringe.

Dr. Harmon Smith, New York—As to what Dr. Myles has said regarding the photographs, there are mistakes made both ways. You never get a picture that looks as bad as the patient before, nor one that looks as good as the patient when it is done. When you ask for an absolute profile, frequently the photographer will give you a three-quarters. The same thing is largely true of the size of the picture. Redness is present in a good many cases. I have seen a case in which the redness lasted over a year, but it gradually disappeared. There seems to be a tendency on the part of Nature to take care of a foreign body, and I think the reinforcement of connective tissue that grows into this mass requires an increased blood supply, and later, when the blood supply is no longer necessary, the redness will disappear. As to the furnace worker, I think if the man would remain away from his work for, say a week or two, he could then go back without danger of shifting the paraffin. Although it might be made soft and doughy by excessive heat, it would not shift. I do not think the heat would extend far down into the subcutaneous tissue, as body temperature remains the same regardless of external temperatures. Dr. Cobb has spoken of the white appearance that results from getting too much paraffin in. I invariably stop when I see the tissues becoming white, for I think then I am near the danger line. There is then considerable pressure, which is often due to not liberating the adhesions sufficiently. Beware of hyperinjection. Take time and you will have little trouble.

Dr. Ingals has spoken of the possibility of aspirating the paraffin, when for any reason it is desirable to remove it, after first melting it while in the tissues. I have tried almost every method for removal. In one case the patient had tried to iron it out and had failed. In another case, which had been injected by another physician, numerous injections had been made in an attempt to relieve the deformity resulting from atrophy of the muscles of the face, with the result that a number of little balls of paraffin remained under the skin. I tried to iron it out, but without marked success. In this same case, where there was some paraffin escaping from a small opening in the skin, I tried to iron it out, but was only partially successful. However, in this case some time had elapsed since injections were made. I did succeed in smoothing the surface somewhat.

THE SUBCUTANEOUS INJECTION OF PARAFFIN FOR THE CORRECTION OF DEFORMITIES OF THE NOSE.

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(Concluded from page 703.)

INSTRUMENTS.

The instruments necessary for the proper performance of this operation are very simple and very few.

A special receptacle for the paraffin, as described by Smith, while convenient, is not essential.

The syringe is the all-important consideration; an all-metal syringe is to be preferred because of the ease with which it may be absolutely sterilized by boiling. One with the screw worm on the piston rod, and on this the thumb screw that can be attached to the barrel of the syringe, is almost invaluable. The size of the syringe is not so very important; that it be not ungainly in the handling is about the only practical limitation. Smith and many others use one with a capacity of about 90 minims, while Downie employs one that will hold 10 c.c. (2.5 ʒ).

The needle should be short and but a little larger in diameter and lumen than is the ordinary hypodermic needle.

TECHNIC.

As regards the technic, that of Gersuny has not been modified to any considerable extent. With the exception of the special syringes, the instruments are practically the same. The operation may usually be carried out in the following order: 1, preparation; 2, anesthetic; 3, introduction of the paraffin, and 4, after-treatment.

1. *Preparation.*—The most careful and painstaking antiseptic precautions must be observed. The skin of the nose, cheeks, forehead and chin must be given a thorough scrubbing with soap and water twenty-four hours before the time set for the operation, or better, once forty-eight hours, and then again twenty-four hours before the time set for the injection. The night before a moist dressing should be applied over the proposed site of injection, over this oiled silk, and then a bandage to keep it in place.

Immediately before the operation, with the patient on the table, the skin of the nose and face should be once more cleansed. The patient's head and hair should be covered with a sterile cap and the remainder of the body with a sterile sheet. The operator's and assistant's hands are being rendered surgically clean while the instruments are being boiled and the paraffin is being again sterilized.

2. *Anesthetic.*—A general anesthetic is never absolutely necessary. A local anesthetization of the skin, at the site of the entrance of the needle, is all that is necessary in the great majority of cases. There is a diversity of opinion regarding the use of a general or a local anesthetic in this class of cases. Downie says:

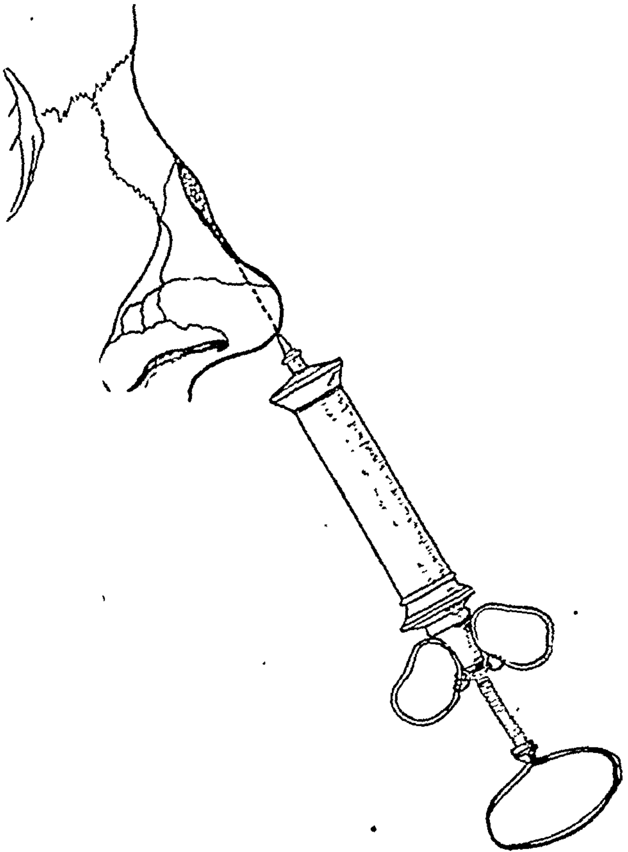

Figure 1.

"The patient may or may not be anesthetized. In many cases there is a distinct advantage in having the patient under an anesthetic. A local anesthetic is, in my opinion, inadvisable."

On the other hand, there is certainly a distinct advantage in having the patient not under general anesthesia, and in certain cases the use of a local anesthetic is the only way that this is possible. While the dangers of general anesthesia are very small, they are, nevertheless, constantly with us and must be considered. The location of the intended insertion of the needle for the injection of the paraffin can be easily anesthetized with a solution of cocain or eucain B., the strength of the solution varying from 1 to 4 per cent., according to different authorities. A 1 per cent. solution was used in all cases by the writer.

Freezing with ethyl chlorid of the site of the future needle puncture may be employed as a preliminary step before the injection of the cocain or as the only local anesthetic, dispensing with the cocain entirely.

In some cases, the injection of the paraffin has been made without any preliminary anesthesia of any kind, either general or local. But the anesthetization of the skin, at the site of the puncture, is advisable, in order to prevent any sudden movement or jerking of the head at the time of the needle prick, which might be the cause of more or less serious damage or inconvenience.

3. *Introduction of the Paraffin.*—The paraffin, having been boiled with the instruments, is now in the fluid state, and is drawn into the syringe—the barrel of the syringe had best be about three-quarters filled. With the ordinary syringe considerable haste is now required in order to make the injection before the paraffin will solidify in the needle of the syringe, so causing great difficulty and force in its removal, and with the probability of irregularities in the mass because of the unevenness of the force applied during the injection. However, with a syringe such as has been described by Smith and by Freeman, this haste is not necessary, the force being applied by means of the screw arrangement, and the result is always even and satisfactory, no matter how long a time may have elapsed between the filling and the emptying of the syringe.

The air being expelled from the syringe, all is ready for the introduction of the paraffin. The skin of the nose is picked up in a fold, and the needle then inserted under the skin. It has been recommended that the skin be incised with a small scalpel, as a preliminary step, and then followed by the insertion of the needle, in this way hoping to decrease the pain and the resistance to the passage of the needle. The site of entrance of the needle should be away from the region of the greatest deformity. If a saddle-back nose, the needle is usually made to enter the skin at about the junction of the nose with the forehead, about on a level with the eyebrows.

Leonard Freeman, and the writer in his cases, have inserted the needle at the tip of the nose, instead of at the apparently more common situation. The chief advantage of this locality over the one more commonly used is that it allows more freedom in the manipulation of the point of the needle after it is once under the skin. Freeman says: "The thickened tissues at the tip of the nose prevents the paraffin from diffusing itself along the track of the needle, as is apt to occur in the areolar tissue at the base of the nose."

From either point, the needle is carried along subcutaneously until its extremity is at the most distant point of the deformity, and is then gradually withdrawn, leaving its deposit of paraffin as it recedes (Fig. 1). In this way all parts of the deformity may be reached with but the single puncture of the skin. The remote point of entrance is to prevent, in a way, the escape of the paraffin after the withdrawal of the needle. As the paraffin escapes into the cavity of the defect, the needle is slowly withdrawn, and with the finger of the left hand the operator molds and outlines the freshly deposited paraffin, thus preventing the injection of too large an amount, also preventing its extension into regions where it is not desired, and likewise preventing the occurrence of any lumps or irregularities in the artificial body. A little finger inserted into the nostril will prevent an encroachment on the lumen of the nasal canal.

The needle should be well withdrawn by the time the deformity has been fully corrected, after which the needle is removed through normal skin, in which it leaves no paraffin and the puncture sealed with a collodion and cotton dressing.

It has been recommended that the entire defect be not remedied at one injection. This is especially good advice when the tissue to be injected is dense and inelastic. Rather inject too little than too large an amount.

4. *After Treatment.*—If the injection has been made into loose tissue, the paraffin must be kept quiet and free from pressure, otherwise it may migrate into the surrounding structures. Under such circumstances, iced cloths may be applied to the region in an effort to make the paraffin set more rapidly. Sometimes there may be for, perhaps, the first twelve hours after the operation a marked disturbance in the local circulation, as is evidenced by great redness and swelling and, more rarely, pain in the tissues about the eyes and nose. This transitory reaction may also be relieved by the application of cold compresses.

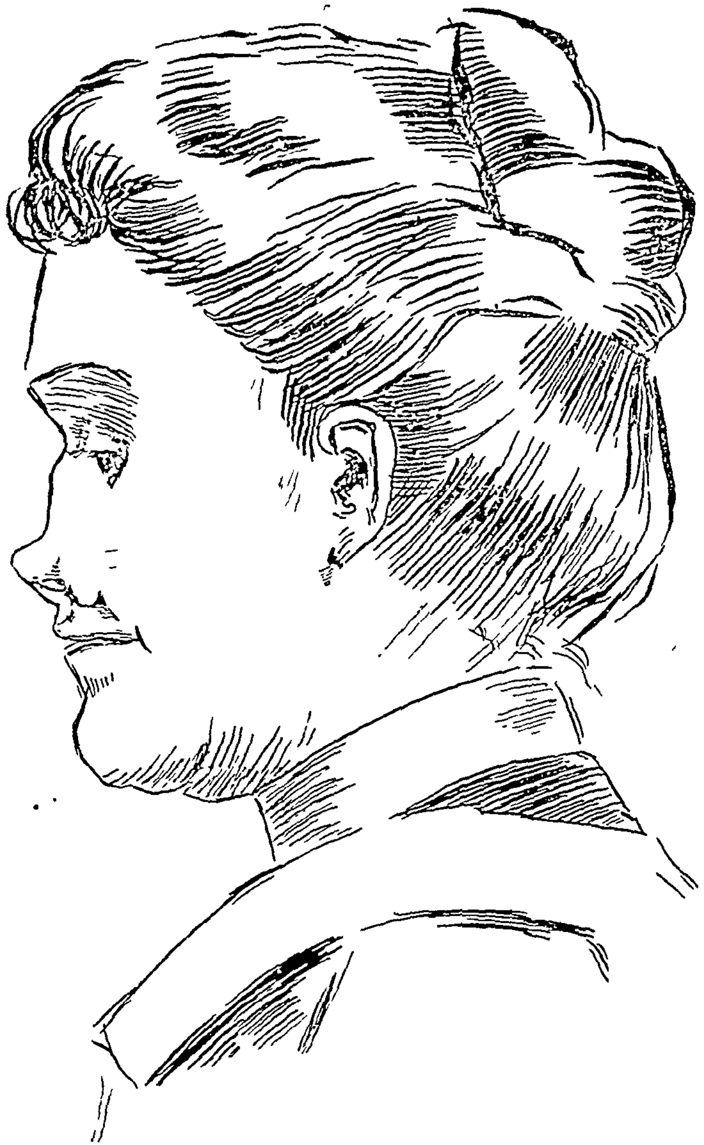

Figure 2.

Paget gives his patients a hand glass as soon as they come out from under the general anesthetic and allows them to mold the nose at that time.

After the first twelve hours the swelling, the redness and the pain rapidly diminish, if they have not already gone, and, as a general rule, no further treatment is required.

REPORT OF CASES.

Case 1.—Mrs. F., American, widow, aged 42. When a small child was struck in the face with a sharp ax, which resulted in a severe injury to the nose, the nasal bones were broken and followed by a necrosis, which caused a loss of the entire septum, a depression of the nasal bridge and collapse of one nostril.

Examination revealed on a profile view (Fig. 2): 1. A typical saddle-back nose. The extent of this depression, or sinking in of the bridge of the nose, was about one-sixteenth of an inch below the normal line of the nose, the greatest depression being situated at about the junction of the nasal bones with the lateral cartilages of the nose. 2. The tip of the nose was forced upward; this feature was exaggerated by the depression immediately above it. 3. A still more unsightly deformity consisted of a ridge or strip of flesh extending from about the junction of the middle with the superior third of the upper lip to the internal aspect of the tip of the nose. The attachment of this strip at the labial extremity was considerably below the cleavage of the lip and the nose proper. in consequence of this low origin daylight could be seen between the superior margin of this strip and the inferior margin of the nose proper. This artificial column was about half an inch in diameter at the labial insertion, and from that tapered down to about a quarter of an inch at the nasal end.

This objectionable strip of tissue was the result of a previous operation, the object of which was to supply the nose with an artificial column, and so to divide the single anterior nares into two, and in this way decrease to some extent, at least, the deformity. In this operation a flap was dissected from the median line of the upper lip, turned on itself and attached to the internal surface of the tip of the nose. This flap healed in place nicely, but it was too large and bulky at the lip, and was attached to the lip at a point too low down, so allowing a space between the new column and the inferior margin of the nose proper.

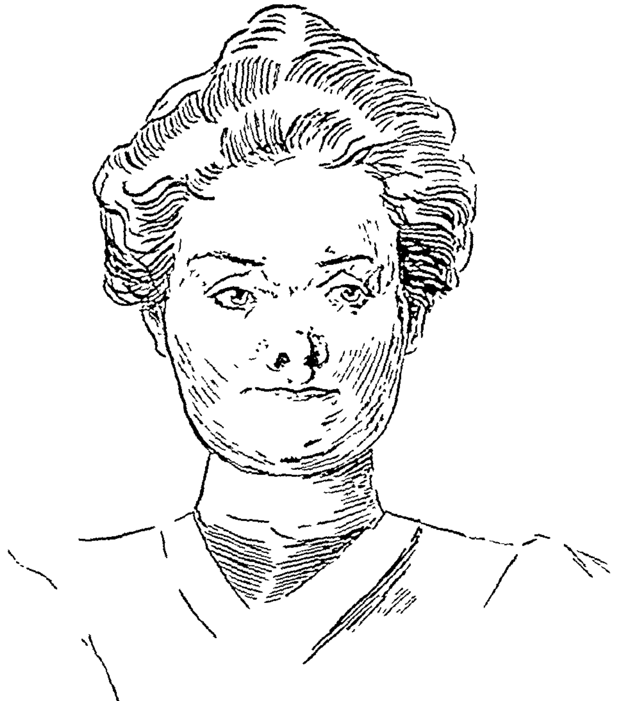
Figure 3.

This operative procedure for the formation of a new columna nasi was first described by John B. Roberts, in the Mutter Lecture of the College of Physicians of Philadelphia, 1900, entitled "The Surgical Treatment of Congenital and Pathologic Disfigurements of the Face." (*Phil. Med. Jour.*, June 23, 1900, p. 1425.) Yet, despite such a prominent publication and as an example of the disregard of American writings by some of the European writers, we find in the *Medizinskoie Obozrenie*, Vol. lviii, No. 15, an article by P. I. Kusmin, entitled "A New Method of Correcting the Destroyed Nasal Septum," which is practically the same method as has been recommended by Roberts and employed in this case.

In this instance the result is unsatisfactory, in that the base of the flap took its origin too far away from the junction of the nose and the lip. This fault was corrected by subsequent operations, but as no paraffin was injected they will not be considered under this title.

On a front view of the face (Fig. 3) the most noticeable departure from the usual was a collapse of the right nostril. That portion of the nose usually held in proper position by the inferior lateral cartilages was flattened and almost in contact with the median line. There being no septum the interference with respiration, especially inspiration, was not marked. The patient usually wore a metal, aluminum, intranasal support, in this way almost correctly remedying the defect. The wearing of this support was irritating, annoying and objectionable. The new column was very prominent and bulky at its origin from the upper lip, and appeared as a reddish bunch on the lip. The depression in the bridge of the nose was not so noticeable as in the profile view. The tip of the nose seemed to be tilted upward and the anterior nares seemed to present in an anterior inferior direction, instead of in an inferior direction, as they should normally. On an intranasal examination, there was noted most prominently the absence of a septum. The mucosa lining the cavity appeared to be normal.

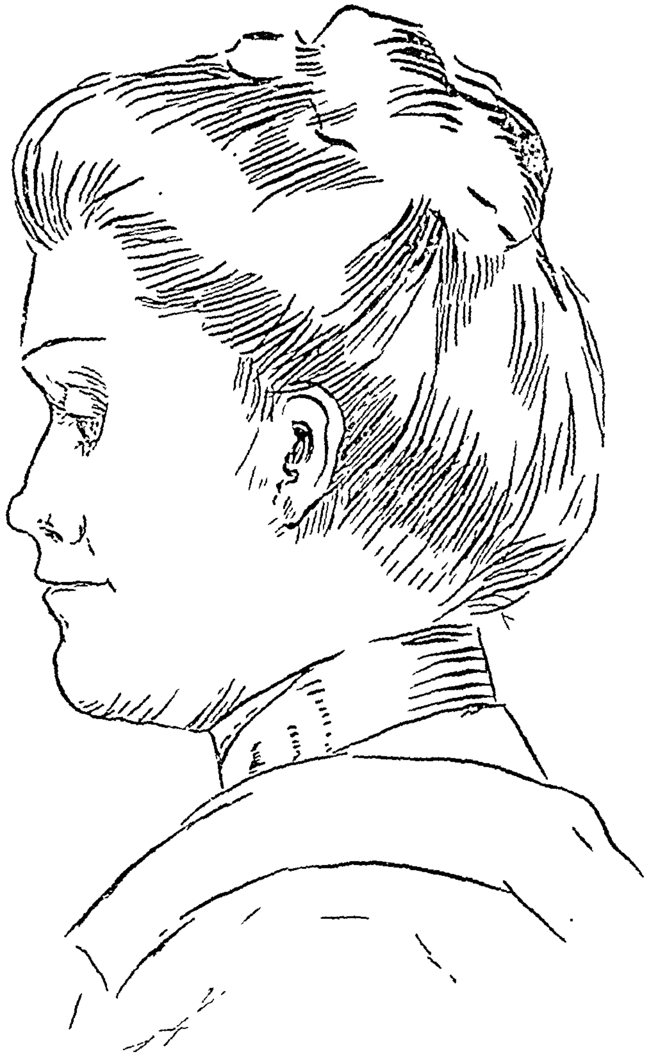
Figure 4.

The patient came requesting that her nose be improved on; that the artificial septum be raised at its labial extremity so that it might appear continuous with the nose on profile; that the sinking in of the right ala might be remedied so that it would not be necessary for her to wear the intranasal support, and that the depression in the bridge of the nose might be rendered less conspicuous, if not removed.

All these conditions were in time corrected, but, in accordance with the title, this paper will deal only with a consideration of those operations in which paraffin was injected as a prosthetic measure.

Operation 4, Injection 1.—A typical operation for the repair of a saddle-back nose: Cocain, 1 per cent. solution, was employed as the anesthetic. The needle was made to enter the skin at a point near the tip of the nose, and about twenty drops of the paraffin were injected. There was no pain during or soon after the operation; the next day and the day following there was noted a sense of fulness and some uneasiness, but at no time was there any complaint of sensation coming under the heading of pain, in its proper sense.

The second day after the operation there was noticed a slight redness of the skin over the injected paraffin, this increased for about a day and was then pronouncedly red.

This redness remained stationary for about a month, and since then has very gradually decreased, so gradually, in fact, that there is still a distinct reddened area over the bridge of the nose. On pressure this redness will disappear, but returns immediately after the removal of the pressure. A few dilated and tortuous capillaries course their way over this area. The condition is still present fourteen months after the injection. There has been practically no change or decrease in the redness during the last six or seven months, it is not as marked as it was during the first few months, but still requires the profuse application of face powder in order to prevent her nose from being conspicuously red.

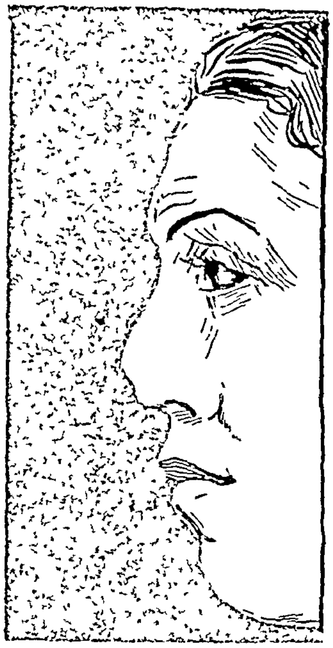
Figure 5.

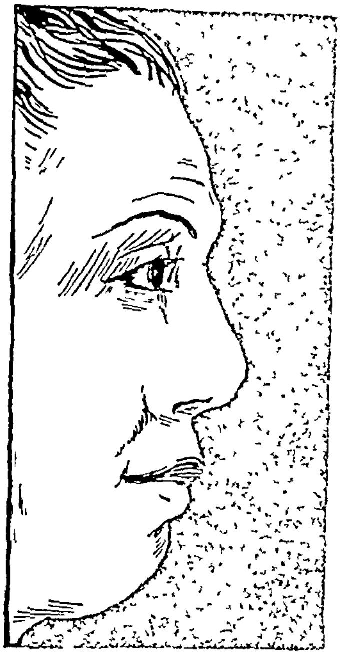
Figure 6.

There is absolutely no pain, tenderness or abnormal sensation over the injected portion, or any other portion of the nose or face. With the exception of the redness the operation is quite satisfactory in its outcome, both to patient and surgeon; another small injection is needed to make the result perfect (Fig. 4). The obliteration of the dilated blood vessels by means of electricity or by crucial incision of the skin is now under consideration.

Operation 6, Injection 2.—A second injection was made in the same case two months after the first in an attempt to remedy the collapse or flattening of the right wing of the nose. In reviewing the literature on this subject, very meager as it is, no practical method with anything but a remote promise of success seemed to present itself.

Roe advocates in such cases that we incise the lower shield cartilage, and sometimes the upper shield cartilage also, sufficiently to overcome their elasticity, and then to hold the alæ, with their incised cartilages, in the more expanded position, until repair takes place, and the tissues are fixed in their new shape and form. He also recites a case in which the cartilage is dissected subcutaneously and "reset" in its proper, or at least in a better, location.

Such maneuvers in this case were out of the question, as there was no cartilaginous tissue in the ala of the nose on the right side.

The more radical method advocated by Fritz Koenig (*Berl. Klin. Woch.*, Feb. 17, 1902) of replacing the abnormal or diseased ala by a portion of the entire structure of the auricle and suturing this in place on the nose, seemed a trifle too radical for any condition in which there was not an absence of the ala. But no other method of replacing the missing cartilage seemed available. At this time the idea of producing artificial cartilage presented itself and was grasped as a most satisfactory solution to the rather trying problem.*

Accordingly the ala was injected with paraffin as follows: After a careful and proper cleansing of the skin and mucous membrane of the nose a preliminary anesthesia, Schleich's solution No. 1, was injected into the site of the proposed paraffin injections. After a lapse of about twenty minutes the needle of the syringe containing the paraffin was inserted into the free edge of the ala at a point about half way between the tip of the nose and the cheek. The needle was made to penetrate about three-eighths of an inch, and then about six drops were injected. The needle was withdrawn and the puncture sealed with collodion.

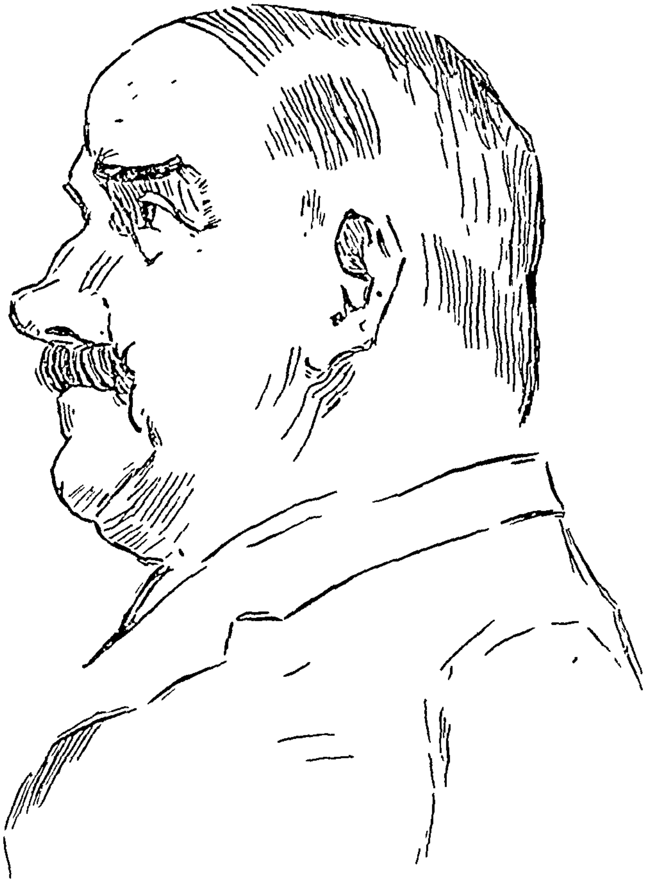
Figure 7.

The needle was now introduced at a point three-quarters of an inch above the free border of the ala, in about the center of the lateral aspect of the nose from above downward, for a distance of about a quarter of an inch, and the same amount of paraffin injected.

The intranasal support was now introduced and held the parts in approximately normal relations, iced cloths were applied for twelve hours and the intranasal support allowed to remain in place for ten days.

There was absolutely no pain or inconvenience caused by the injection, and the course of the case was uneventful. There is considerable improvement in the appearance of the nose, but it is not as perfect as it is when the ala is held in proper position by the intranasal support (Fig. 4). The result, while not perfect, was such as to make considerable of an improvement in the countenance and expression of the patient. In a case less complicated, with more substance to act as a foundation, as in congenital deformities, it is probable that a still more satisfactory outcome could be obtained. Unfortunately the writer has never seen a similar case treated by any other method, and so is unable to draw any comparative conclusions. Parker reports one case treated in this manner, but with no improvement after repeated injections.

Case 2.—Tim M., miner, Irish, aged 28, in a rough and tumble fight was unfortunate enough to have the tip of his nose bitten off by his opponent. He presented himself, ten hours after the accident, at the St. Vincent's Hospital, with the separated portion of his nose wrapped up in a piece of newspaper, and requested that it be sewed in place. Wet dressings were applied to the abbreviated feature and in due time flaps from the cheek were brought over and the defect covered up. The result was satisfactory in covering the defect with skin, but the configuration of the nose was far from satisfactory, owing to the absence of the tip. The front view was not so unusual or remarkable, but the profile presented a marked and conspicuous deformity in the absence of the tip; in fact the distal third of the appendage was missing (Fig. 5).

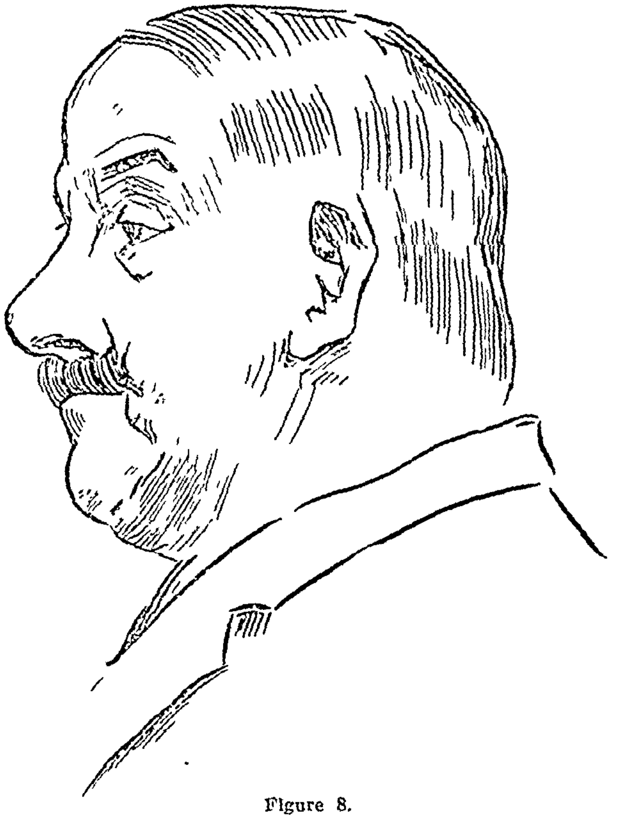

Figure 8.

This was, in a way, remedied, or rather rendered less noticeable by the introduction of paraffin into the region formerly occupied by the extremity of the nose. After the usual cleansing and the regular preparations, about ten minims of paraffin were injected under the flap and in about the median line, so that it would rest on the remains of the cartilaginous septum

After a month this procedure was repeated, without any undesirable result after either injection (*Fig. 6*). The improvement was encouraging and the skin over the injected mass normal in every particular and not at all tense or stretched. Other injections were planned, but the patient disappeared.

The introduction of small amounts, at *intervals*, is undoubtedly to be preferred to the single injection of larger amounts, in any location and under all circumstances, but it is especially true and important when injecting into a region so notoriously non-vascular and prone to necrosis as the tip of the nose. And of still greater importance is this precaution when the overlying skin of this part has been transplanted from a neighboring region.

Case 3.—Dick G., laborer, American, aged 37, about eleven years ago fell down a stairway and injured his nose. No physician was called to see him, and he paid little or no attention to the injury; he merely remembers that for about a week or so his nose was tender and his entire face swollen. After the swelling subsided he noted a depression in the bridge of his nose (Fig. 7.), which has remained about the same ever since. It caused him no pain or inconvenience other than the slight deformity. The skin over the depression is normal and moves freely over the cartilage and bone.

A typical operation for "sadle-back" nose was performed, technic as described above; fifteen minims were injected at one sitting. The result was a marked improvement in his appearance and was very satisfactory. No redness of the skin over the injected area or any other objectionable features resulted (Fig. 8).

Case 4.—Mr. W. E., miner, American, aged 32, three years ago, while in a fist fight, was struck on the nose. He had considerable nose bleed, pain and marked swelling the next morning, at which time he consulted a physician, who told him that his nose was broken, and then proceeded to "set" it After the swelling had subsided a depression of the bridge was noted, which has remained practically the same ever since (Fig. 9). The greatest depression is at about the junction of the nasal bones with the cartilages and in depth is about one-sixteenth of an inch. The skin and overlying structures are normal and freely movable. Treatment consisted of a subcutaneous injection of paraffin, the same as in the case above about twenty-five minims were injected at one sitting, and the result was eminently satisfactory in every respect (Fig. 10).

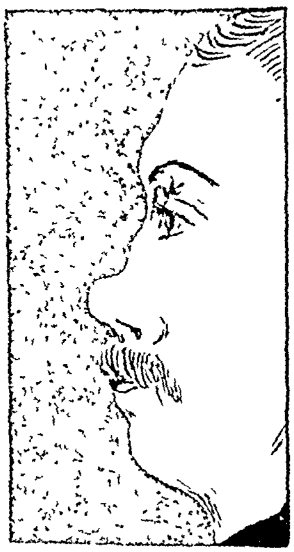

Figure 9.

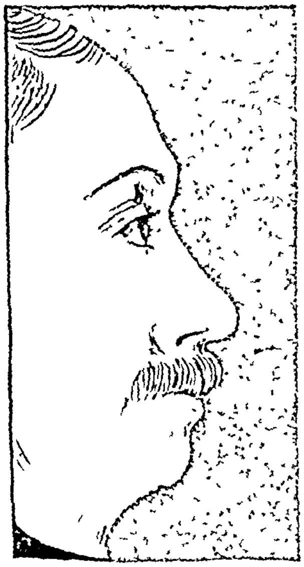

Figure 10

CONCLUSIONS.

1. Corning was the first to use solidifying oils in surgery.
2. Gersuny was the first to recommend and to use paraffin subcutaneously as a prosthetic measure.
3. The use of paraffin as a prosthetic substance is still in an experimental stage.
4. The field of usefulness of paraffin subcutaneously in other than nasal deformities is rapidly increasing.
5. Prosthetic operations, undertaken solely for cosmetic effect, should be absolutely harmless.
6. All cases, regardless of the termination, should be reported, as it is only by a study of a large number of cases that the legitimate place of this method in surgery can be ascertained.
7. The special syringe, with screw pressure, is almost indispensable.
8. A general anesthetic is rarely, if ever, indicated.
9. The needle may be made to enter at either the base or the tip of the nose.

10. Rather inject too little than too large an amount of paraffin.

11. In a series of six cases, but one of the numerous objections was encountered, and that a redness of the skin remaining permanently after the injection.

DISCUSSION.

Dr. Andrew W. Morton, San Francisco—My experience with paraffin injections has been limited to 25 cases. My method is somewhat different from Dr. Connell's. I bring the melting point of the paraffin to 109 degrees by the use of sperm oil, after which it is sterilized by boiling. I am careful to introduce it just as it is beginning to coagulate. It has been proven thoroughly by Dr. Comstock that we must have the paraffin about the temperature of the blood to prevent embolism; it is also well to have the paraffin a little above the temperature of the blood or it will not support the deformity. For the introduction of the paraffin I have been using the Lures glass syringe. I always introduce the needle at some distance from the deformity beneath the skin, allowing the point of the needle to come just beneath the deformity, then I attach the filled syringe and introduce the paraffin.

It has been used in a great variety of cases, but the principal use, in my opinion, is for the saddle-back deformities of the nose. We know there is no class of deformities where we have need of repair more than in those cases. On account of the weakness of the structures, if we use an artificial bridge it is always causing irritation and operations are not satisfactory. In regard to the quantity of the paraffin, I always use a small quantity and repeat it if necessary, but I think this is very immaterial if we do not produce tension, and I think Gersuny has called attention to that; his experience has shown that the amount injected at one time does not make any material difference. I have introduced 40 c.c. at one time; it was in the case of an absent testicle; the man wished to enter the marine-hospital service, but had been rejected. I injected the 40 c.c. at one time, and there was absolutely no change so far as inflammation was concerned, and the day he went away I could not discern which was the artificial testicle except by palpation.

There is one subject that has not been touched on, and that is, what becomes of the paraffin? It was claimed that it could not be absorbed, and would remain in the tissues as paraffin. Recently I had a case which enabled me to make some very interesting experiments. Some of the paraffin had worked down into the tissues and interfered with the breathing space. I took out sections at the end of one, two, three and four months respectively. In the first section you will see paraffin globules; later you will notice that they have been infiltrated with leucocytes and tissue cells. In the last specimen you see an entire absence of the paraffin. This shows that the paraffin is destroyed and its place is taken by connective tissue. In regard to the shrinking of the paraffin, I believe that it will shrink to a slight degree, owing to the small amount of oil which passes off after the injection. As to the principal dangers of the operation, they are: 1, infection; 2, tissue necrosis, or necrosis of the bone; 3, embolism. The infection can be prevented by being aseptic. It is also possible to prevent sloughing, provided you do not use your paraffin at an extreme degree of heat, or produce a great amount of tension on the skin. In regard to embolism, one case of lung embolism has been reported that we attributed to this method. A large amount of paraffin was used, the operation being done in the physician's office for some prolapsed condition of the rectum, and the patient was allowed to enter a carriage and ride home —not a very cautious thing to do. One of the principal points is not mentioned in the report, the melting point of the paraffin. I do not believe that there is very much danger of embolism if we use the paraffin at a melting point above the body heat.

Dr. John P. Lord, Omaha—Dr. Connell speaks of the disadvantages of the reddened area. I want to say that our experience with the *x*-ray in the blanching of unsightly red scars has been so satisfactory that I have perfect confidence in it, and the technic should be that the exposure should be of short duration and the treatment should cover a long period of time, care being exercised not to produce a burn. The *x*-ray obliterates the small blood vessels by producing an hyperplasia of the connective tissue cells which squeeze out the blood vessels. Of course, if the blood vessels are of any size I would recommend the use of the electrolytic needle, but if it is simply a redness I think the *x*-ray can be depended on to accomplish very satisfactory results.

Dr. William J. Mayo, Rochester, Minn.—The methods employed for the repair of depressed noses may be divided into three groups: first, those by a flap from the forehead or cheek or the tip of the little finger, and things of that kind carried to the nasal defect, the best result being that after we got through most people would say that it did not look much worse than it did before. In the second class we introduce a celluloid bridge. Some exceedingly good results have been obtained, but after a time atrophy necrosis takes place in the majority of cases, and we have to remove the celluloid. Therefore, when this paraffin method came out it was taken up enthusiastically, particularly by my brother, Dr. C. H. Mayo, who has had considerable experience in this line of work. He has operated on a large number of cases and the results have been strikingly good. You see the patient come into the hospital with a deformed nose, and in twenty minutes he goes out again, his appearance so changed that his best friends would scarcely recognize him. In regard to those cases in which the deformity is due to a compound injury, if you were to attempt to inject enough of the paraffin to get a good result you would be very liable to get into trouble, on account of the adhesions of the skin to the deeper parts. In those cases a small knife is introduced and the tissue cut loose a few days previous to the injection; the paraffin can then be injected without trouble. It is advisable in some cases, where you have to sever the tissue in this manner, to use an injection of saline solution to loosen the tissues still further, and follow this in a few days by the injection of paraffin.

MULTIPLE PERIOSTEAL SARCOMATA OF THE CRANIUM,

WITH INVOLVEMENT OF RETROPERITONEAL LYMPH NODES, AND ATTENDING SEVERE, PROBABLY PERNICIOUS, ANEMIA.*

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Through the exhaustive work of Warthin the retroperitoneal lymph nodes or hemolymph glands have been given an important rôle in human pathology. Changes in these hitherto frequently unrecognized structures are specially significant of anemia and processes accompanied by hemolysis.

I feel that the case, a description of which I wish to submit, illustrates this relationship in a special way, and offers a few additional points of pathologic interest as to warrant its being presented before this section.

The case occurred in the practice of Dr. C. B. Kimball of West Liberty, Iowa, to whom I feel indebted for calling my attention to it and furnishing me with the principal clinical data, which in brief were as follows:

A. B., girl 5 years of age, who until three months before her death enjoyed good health and had been regarded as an unusually robust child. When first seen by her medical attendant she presented a mild degree of anemia, a slight rise of body temperature, some malaise, impairment of appetite, and physical weakness. During the period of illness mentioned, the anemia assumed a progressive pernicious character, the pyrexia of one to two degrees continued, and the emaciation and physical weakness proportionately increased.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Pathology and Physiology, and approved for publication by the Executive Committee: Drs. L. Hektoen, F. B. Wynn and W. S. Hall.

At my first opportunity to see the case, Oct. 5, 1902, the anemia was quite pronounced and the child appeared weak and listless. There was no enlargement of any of the palpable lymph nodes, but over the frontal region a soft subcutaneous sessile tumor-like enlargement, about three centimeters in diameter, was observed, which was apparently attached to the frontal bone.

A hemic murmur was noted over the base of the heart; the lungs were negative; the splenic area of dulness not increased, and the organ not palpable. Area of hepatic dullness not increased, Urine acid, specific gravity 1,022; chemical tests negative. Signs of intracranial pressure were not present.

I saw her again one week before her death, when she appeared in a semicomatose state, the anemia being very profound and emaciation specially marked. There was no noticeable change in the different lymph nodes. The spleen was not enlarged, though a perceptible yet slight enlargement was noted in the hepatic area of dullness. Urine negative. Lungs negative. Hemic murmur still very pronounced over the basal region of the heart.

The frontal tumor had apparently enlarged and four more tumors were now to be detected over the parietal and occipital bones, and one over the left mastoid region. A slight degree of exophthalmus was present. The blood count revealed erythrocytes, 982,000; leucocytes, 9,600; hemoglobin, 30 per cent. Differential count in 17,874 red cells revealed: megalocytes, 473; microcytes, 328; poikilocytes, 45; megaloblasts, 23; normoblasts, 19; leucocytes, polymorphonuclear, neutrophile, 68.6 per cent.; eosinophile, 2.26 per cent.; large lymphocytes, 2.52 per cent.; small lymphocytes, 26.46 per cent.; myelocytes (neutrophile), 63 per cent. Proportion of white to red cells, 1 to 113. Most of the erythrocytes were about the average in size

At this time a clinical diagnosis was proposed of multiple periosteal sarcoma, with attending severe secondary, probably pernicious, anemia.

Report of Autopsy.—Nov. 20, 1902. General emaciation very marked, the skin being extremely pale. No change noticeable in the cervical, axillary, clavicular, and inguinal lymph nodes.

Skull and Cranial Contents.—After removing the scalp seven distinct circumscribed tumors are observed attached to the skull, appearing as cushion-like growths and distributed as follows: One over the frontal bone, two on the left parietal, one on the right parietal, one over the right mastoid, and two on the occipital bone. The tumors are of soft consistency and vary in color from deep gray to pinkish and reddish gray; in diameter they range from 3.5 to 6 centimeters. The growths extend above the bone about one centimeter, and are well defined from the skin and subcutaneous tissues. After the skull cap is removed the tumors are seen to have completely penetrated both the outer and inner tables, the latter presenting a distinct honeycomb appearance; the growths also involving the dura mater.

A considerable amount of subdural serous effusion is present. The brain is pale and anemic, but otherwise negative.

Diaphragm at Fourth Rib, Right and Left.—Pleura and pericardium negative; heart valves intact, musculature anemic and somewhat atrophic. The lungs are pale and freely movable with some passive congestion in the lower lobes; bronchi pale, containing a grayish foamy liquid. Esophagus contains a small amount of foamy mucus, mucosa pale.

No fluid in the peritoneal cavity. The spleen is not enlarged, on section it is a pale brownish red; pulp is soft and bleeds readily. The liver appears slightly enlarged; the surface is smooth; on section the surface is cloudy, and of a pale red chocolate color; a slight fatty smear is left on the knife; outlines of lobules distinct; throughout the liver substance a limited number of light-colored circumscribed areas are noted, ranging from 0.3 to 0.8 centimeters in diameter and having the macroscopic appearance of the cut surface of the cranial tumors. Gall bladder negative. Kidneys are pale; a retention of fetal lobulation exists, otherwise negative. Bladder negative. Pancreas and suprarenals negative. The stomach and intestinal mucosa is pale, but negative in other respects. Mesenteric glands are negative.

In the retroperitoneal region a marked enlargement is noted in the prevertebral lymph nodes or hemolymph glands; extending from the brim of the pelvis upward along the aorta and vena cava are sixteen enlarged and dark red glands, forming in reality a dense mass involving an area of 5x12½ centimeters; the larger glands being 2x3½ cm. in dimensions, and of a dark red color; the smallest examples having a coffee-bean shape, 0.6x1 cm. in diameters; pale and red nodes are noticed placed side by side. A few of the smaller glands extend along the renal vessels. The entire mass is imbedded in fat and very closely connected with the surrounding blood vessels.

The long bones were not opened owing to the restrictions placed on the autopsy, but the cross section of the sternum presented the hemorrhagic appearance of marrow peculiar to severe anemias. The extreme emaciation of the body permitted a good examination of the surface of the different bones, and disclosed an absence of any periosteal growths or enlargement of the bones.

Histologic Examination.—The tissues were all studied in serial paraffin section, and stained by hematoxylin and eosin, Van Gieson's, and Mallory's stain for connective tissue, and the potassium ferrocyanid method for demonstrating hemosiderin.

Periosteal Tumors.—While the general histologic picture is that of round cell sarcoma, there is some degree of variation between the several tumors. The cell element consists of a round cytoplasmic mass with a nucleus rich in chromatin, the latter varying in size, frequently granular, and seen in varying stages of mitosis; a delicate intercellular reticulum is present; the fibrous tissue stroma following principally the blood channels forms an alveolar arrangement in some portions and presents the type of an alveolar sarcoma; again the prominence of blood vessels and hemorrhage give a picture resembling angiosarcoma, while the light gray colored tumors in section reveal a type like lymphosarcoma.

The ordinary lymph nodes present no definite histologic changes. Heart and lungs are negative. Brain is negative.

Spleen reveals a slight degree of fibroid hyperplasia; hemasiderosis is very marked. Adrenals, kidneys and pancreas are negative. The stomach and intestines reveal some signs of catarrhal inflammations.

Liver.—Cloudy swelling in the cells, lobules are not well defined, and interlobular interstitial connective tissue is not increased. Distributed throughout the liver substance are well-circumscribed areas representative of metastatic growths secondary to the periosteal tumors, evident by reason of their identity in structure. Their histology consists of small round cells arranged in distinct alveoli formed by rather delicate fibers of connective tissue, resembling the picture of alveolar sarcoma. Hemasiderosis is present.

Hemolymph Nodes.—The smaller nodes 0.5 cm. in diameter present a histologic picture resembling the so-called marrow-lymph variety of hemolymph nodes, consisting of well-defined sinuses apparently lined by endothelium; throughout these sinuses a delicate reticulum is noted holding in its meshes principally red blood cells and a few leucocytes. Among the red cells normoblasts are observed and an occasional megaloblast. A few eosinophiles are seen. Some of the blood sinuses are very short and irregular. The constituent lymphoid tissue adjacent to the blood sinuses is made up of columns or bands of cells chiefly lymphoid (small mononuclear) in character; these cells also lie in a very delicate reticulum; large mononuclear lymphocytes are observed in small numbers, frequently mitotic figures are seen and again some of the nuclei appear also completely disintegrated. Large collections of hematic pigment are seen in the lymphoid area and the iron reaction is brought out by application of the potassium ferrocyanid stain. A few hyaline bodies are noted.

In the larger examples of hemolymph nodes, especially those having dimensions 2x3½ centimeters, the round or lymphoid cell infiltration completely obscures the essential hemolymph structure.

The cells are arranged in columnar-like collections divided by bands of fibrous connective tissue of greater or less density, forming alveolar areas resembling the picture of alveolar sarcoma; again in some areas the resemblance to lymphosarcoma is very striking. The cells contain large round granular nuclei, with varying figures of mitosis, resembling the cells of round-cell sarcoma.

In the peripheral portions of the enlarged nodes well-defined areas of red blood cells are seen and the lumina of well-formed blood channels are observed, some of which resemble closely the sinuses of hemolymph nodes except that the delicate intercellular reticulum is not apparent. Small areas of caseation are present in some of the cell areas. In all of the enlarged hemolymph nodes hematic pigment is abundant, some of which responds to the iron reaction, phagocytes containing hematic pigment being noted in the blood channels.

Unfortunately the circumstances of the autopsy prevented the histologic examination of the bone marrow.

Summary.—The features that invite interest in connection with this case are the multiple periosteal sarcomata confined to the cranial periosteum, the secondary involvement of hemolymph nodes, and the attending severe, probably pernicious, anemia. The origin of the tumors from the periosteum seems evident by reason of the intimate connection with the surface of the bones; the involvement of the inner table and extradural tissue being the result of extension.

If one of the periosteal tumors is to be regarded as the primary growth and the others as secondary nodules, it would seem like rather an unusual form of metastasis, and I prefer to regard them all as primary tumors.

It must be evident to all that considerable confusion exists in the literature on the various sarcoma-like tumors involving the osseous system, especially those which are attended by leukemic or pseudoleukemic change in other tissues. This is principally true of the multiple periosteal tumors having the histologic character of round cell sarcoma and described as chloroma and lymphosarcoma in which the relationships to pseudoleukemia is rather intimate.

Chloroma is frequently characterized by multiple periosteal plate-like growths especially of the cranium with metastasis in the lymph nodes, different portions of the skeleton and internal organs. In structure they resemble lymphoma or lymphosarcoma and contain a greenish pigment.

The absence of pigment in the case in question, especially in the fresh specimens, excludes chloroma, but in some other respects there is a great resemblance to this peculiar tumor process.

Closely related to chloroma are those non-pigmented pseudoleukemic periosteal tumors having the structure of lymphosarcoma which have been extensively considered by Claus under Marchand's direction, the same appearing as cushion-like growths on the skull, sternum, ribs, pelvis, spinal column and femur with tumor formations in the tonsils, lymph, nodes, liver, and marked enlargement of the spleen. Lazarus, Gussenbauer, Chiari, and Dittrich have described more complicated cases in which the spread of tumors in internal organs was more prominent, giving the impression of a general metastasis, the relation to the primary periosteal localization of the malignant lymphoma, though, being well defined.

As to the tumor nodules in the liver and involvement of the hemolymph nodes with their identity in histologic structure to the primary cranial growths, the findings warrant regarding them as secondary or metastatic formations.

The close resemblance of the arrangement of cells, with numerous mitotic figures in the enlarged hemolymph nodes to that in the periosteal growths is so striking as to permit of no other conclusion than that they are metastatic.

Both of the secondary manifestations must be regarded as examples of vascular metastases, and it must be due to the connection of the hemolymph nodes with the circulatory system that they are more liable to involvement than the other lymphoid structures throughout the body. The fact that the lungs were not involved by metastasis may be attributed to the relatively small size of the constituent tumor cells permitting them to pass through the pulmonary circulation.

That the attending severe, probably pernicious, anemia is the result of hemolysis, is evident from the general blood changes and the hemosiderosis in the spleen, liver and hemolymph nodes. The blood findings are very similar to those of pernicious anemia.

This case offers a further illustration of the relationship between changes in hemolymph nodes and the severe anemias. According to Warthin there is a certain amount of normal hemolysis taking place in these glands, and the hemolysis of severe or pernicious anemia differs from the normal only in degree. As the last named condition is probably due to some circulating poison, the nature of which is as yet unknown, so in the case described it is a circulating sarcoma process, which by reason of its involvement of the hemolymph nodes led to an increased hemolysis in these structures.

It is in this class of sarcoma-like tumors, including chloroma, and those of lymphosarcoma and pseudoleukemic type that a parasitic cause will probably ultimately be discovered.

DISCUSSION.

Dr. E. R. LeCount, Chicago—There is an intimate connection between the tumors in the case described by Dr. Bierring with the growths observed on the one hand, as multiple myelomas, and on the other in cases of chloroma. Had the tumors described in this case been possessed of a greenish cast Dr. Bierring would no doubt have considered his case as one of chloroma. The absence of the peculiar color does not seem to me sufficient reason for excluding the growths in this case from those in pseudo-leukemia, chloroma, multiple myeloma and acute leukemia. Therefore, I would object to the term sarcoma and prefer some name which would indicate their position correctly as examples of multiple growths unconnected with sarcoma in method of origin, growth, and extension; for example, "multiple periosteal lymphomata" or "a case of chloroma with absence of the usual pigmentation." The term sarcoma has little to do with tumors that are primarily multiple.

Dr. Henry A. Christian, Boston—Dr. Bierring speaks of the difficulty in such tumors of determining which is the primary growth. The relation that exists between the more or less diffuse processes in bones and definite tumor masses is a very close one, and to say that a certain growth is primary and the others are metastases is very difficult in a case like this. A great many similar examples have been reported and I would like to add one. It was a case in which both kidneys were very much enlarged, four or five times their normal size, but they were not distorted and there were no definite tumor masses in the kidneys. They were both of the same size. Microscopic study showed the kidney tubules to be separated by a growth which proved to be of the nature of a round cell sarcoma, a diffuse sarcoma appearing simultaneously in both kidneys. The bone marrow of the femur showed similar changes. The question is, whether we have here a tumor of the bone marrow metastasing in the kidneys, the development in the kidneys of a tumor, bilateral and simultaneous in origin, or have we some general diffuse condition of the bone marrow which has not found its expression in cellular changes in the blood vessels as in leukemia, but has affected certain organs in a similar manner as the bone marrow.

Dr. Walter L. Bierring, Iowa City, Iowa—I appreciate what Dr. LeCount has said in regard to the terminology of this condition, but I labored for a long time in trying to name this process, and while I know that the term sarcoma is not entirely satisfactory, it seems to me that the various round-cell growths variously termed as chloroma, lymphosarcoma and small round-cell sarcoma are all more or less connected, and I think some day they will be cleared up and shown to be of parasitic origin.

I made a number of inoculations from fresh tissue material under proper precautions on the various culture media, but was unable to obtain any results. All tests for albumin and albumose in the urine were negative.

I regret that the restrictions of the autopsy prevented an examination of the long bones, but in this case I am still inclined to think that they were not particularly affected.

POLITICAL AND PROFESSIONAL ETHICS.*

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I believe that the majority of physicians concede the truth and justice of the philosophy of Bacon, who writes, "I hold every man a debtor to his profession; from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves by way of amends to be a help and ornament thereunto." The very acknowledgment of such indebtedness carries with it obligations and duties which we as a body and as individuals can no more shirk than we can the duties and responsibilities we owe our patients. Hippocrates recognized the indebtedness he owed his profession, despite the crudity of medicine as it was then taught and practiced, and notwithstanding the less respected position then occupied by the medical fraternity. Probably the first universally received code of ethics, as offered by this worshiper at the shrine of justice and science, was inspired by the realization of this very indebtedness.

Notwithstanding the lack of erudition and despite the prevailing practice of charlatanry that existed in ancient and medieval times, medical men have, as a body, recognized certain obligations as being due their fellow practitioner and the community, and have commanded and received a certain respect as the inalienable endowment of their profession. We note, too, that as medical knowledge and scientific attainment have become more universal and of more value that the morale of our profession has improved, and with more honest methods prevailing there exists a more perfect sense of our obligations and duties.

Our profession has for ages been composed of men whose high sense of honor and integrity and whose moral and intellectual qualifications entitled them to a social standing second to no other class. The true physician has been and is clothed with habiliments of dignity which it becomes our duty to preserve and to hand to posterity in an unsullied state. The young man beginning his career as a physician receives as a heritage from his profession certain immunities, certain social rights and privileges and certain claims to the respect and esteem of his fellow beings, which by his own unassisted efforts he could only hope to win after years of unremitting devotion to the loftiest moral and ethical principles. It is this unsolicited and unearned inheritance which places the physician in the very springtime of his career under obligation to his profession. While in isolated cases this sense of indebtedness is ignored and the title of physician is prostituted by charlatans, yet I am proud to believe that as a body we have never been justly charged with unfaithfulness to our obligations.

The physician who wilfully devotes his entire efforts to his patients or to his family, who isolates himself from his fellow practitioners, who neglects his political and social duties, who contributes no assistance to medical societies and whose life is spent in his patient's behalf and his own self-aggrandizement, no matter how conscientious are his efforts and how honest his intentions, is not only remiss in the discharge of his entire professional obligation, but his narrow existence has unfitted him for the discharge of some of the most sacred duties he owes his fellow man. When he fails to exert his influence for the elevation of his profession and for increasing its sphere of usefulness, he can not excuse his course with the plea that the demands made on him by his patients are paramount in importance to the duty he owes his profession. For he who persistently adheres to this narrow course, who never looks beyond the horizon of his own private needs, defeats ultimately his own ends by lessening his influence in his immediate sphere.

The average physician is not and obviously could not be a politician after the usual acceptance of the term, but there is none among us who does not recognize the existence of certain political evils which by legislation might be corrected, and certain political reforms that would result beneficially to all. It is an established though unfortunate fact that there is in the public mind a deep-rooted prejudice against any interference on the part of the medical profession in political affairs. Let us as a body pass any resolutions or endorse any enactment for the preservation or improvement of the public health, or for the elevation of the standard of our profession, and our cause is at once prejudiced in the minds of the average individual, who is ready at once to attribute our acts to motives of selfishness and self-aggrandizement. It is only when through the medium of threatened or existing epidemics the public is brought to realize its dependence on the medical practitioner that we as a profession are in a position to dictate legislation suitable to our own and the people's needs. It is a matter of common observation that in the absence of epidemic sickness every community is singularly indifferent to the poor sanitary and hygienic conditions that may prevail, and are peculiarly resentful of any imputation on the healthfulness of their people. Unmindful or ignorant of those factors that might better their condition they lull themselves into a state of fancied security, ignore the advice of the physicians and are only awakened from their lethargy by the frightful ravages of some destroying epidemic. Then it is that they turn to our profession for deliverance, and then it is that the ear of the politician becomes receptive to our council.

I speak advisedly when I say that in our entire country there is not in a single statute book a law passed at the instigation of the medical profession that is not productive of more benefit to the masses of the people than to the physician. I challenge anyone to produce a single statute bearing on medical matters that can properly be construed as class legislation. In the history of legislation in Florida I challenge the production of even a single defeated bill which was endorsed by our profession and which had not for its prime intent the protection of the people of our state. And yet, despite this, any combined effort on our part to influence legislation is at once regarded with suspicion and fails of accomplishment on account of the designing, sordid and selfish motives that are attributed to us.

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* Read before the Florida Medical Association, at St. Augustine.

Our profession unanimously endorses a compulsory vaccination law because in the hands of medical men are statistics proving the miraculous preventive powers of vaccination against smallpox, and it is our contention that it is one of the fundamental laws of sociology that no man has the right to jeopardize the health and life of a community when by the observance of proper precautionary measures it may be avoided. Immediately there is raised the hue and cry that the autocratic doctor is aiming at the personal rights and privileges of the people, and as unselfish a bill as was ever presented to a fair-minded people goes down in defeat. Year after year are bills looking to the elevation of the standard of our profession and the protection of our people from charlatanry and imposition introduced in our legislature and to the din of vituperation and the slogan of interference with personal liberty our colors trail in the dust.

The enlightened physician is broad enough to realize and acknowledge that he as a component part of a community best subserves his own interests by best serving his people. He acknowledges that from a purely commercial point of view the result of epidemic disease would, by impoverishing his community, prove nearly as disastrous to him as to his people, but moved by a humane and altruistic spirit the doctor finds his chief reward in protecting and preserving the life and health of his fellow men even if, as often happens, his efforts encounter the opposition of the very ones he seeks to befriend. If our profession was composed of men of less charity and forbearance, an inappreciative public would be left to their own impotent endeavor to solve the problems of sanitation and protective medicine. It is no wonder that there is a tendency on the part of some of us to abandon a thankless undertaking, for it sometimes seems that in spite of our most loyal efforts it will always be thus, "truth forever on the scaffold, wrong forever on the throne."

Why the populace are less responsive to concerted action on our part than to individual effort can, in my mind, be only explained on the ground that when physicians band together for any accomplishment they are regarded as a trust, and the public generally is antagonistic to organization.

Compare this prejudice to medical organizations with the general approval with which our commercial bodies are regarded, and the result of such comparison is almost disheartening. If a board of trade endorses certain legislative enactments for the protection of the financial interests of a community, the masses of the people have sufficient confidence in the integrity of this board to wisely rely on and be governed by their endorsement. The press will come to their assistance and, if need be, a fund is created for the promotion of the enterprise.

Let a medical organization, on the other hand, originate or endorse measures which have a vital bearing on the health of the same community, and to whom will it look for support? The press in certain instances is subsidized by advertising charlatans, and the people, instead of according us their moral support, are either indifferent to our efforts in their behalf or are ready to rise in denunciation of our most honest purposes. The same confidence that is accorded us as individuals is denied us as an organization. Probably this is because the people, not being aware of their needs, resent as an interference any unsolicited or unrewarded action in this direction; for as concerns other matters of even less importance where the physician's assistance and council is solicited and remunerated, he must needs feel complimented and gratified over the confidence that is reposed in his integrity, ability and veracity. Courts of justice are guided or influenced by our expert testimony, even when the very life and liberty of people are at stake. Civil and military authorities rely implicitly on our statements and opinions, and there is a liberal and generous spirit manifested toward our individual efforts which renders it remarkable that our concerted political influence is so limited. I believe that little has ever been accomplished by the mere adoption of resolutions by medical organizations; and, on the contrary, I believe that the influence we as individuals might exert politically is practically unlimited. And when we note that through defective or unjust legislation our professional institutions are endangered, it becomes as much our duty to exert our political influence as to protect from violation the sanctity of our homes.

I believe that we neglect to utilize our peculiar advantages to educate the people to a realization of our needs and the impositions that they are subjected to at the hands of impostors and degenerates. The physician is in close contact with his patient at a time when his ear is most receptive to instruction and his nature most responsive to our honest appeal for justice. We watch the busy practitioner in the discharge of his daily duties. He it is who ministers to the sick and suffering around us, his the face to welcome to returning life and health those stricken by disease, his the voice to lend comfort and courage to woman on the verge of maternity, his the hand to close the eyes for their eternal sleep and to wipe the death damp from the brow. His the first voice to tender solace and comfort to that family visited by the grim destroyer and bid the stricken souls take hope again. To his patients he is more than a friend and his opportunity for exerting an influence is without limit and without rival. I ask, are we not remiss in the duty we owe our profession when we fail to enlighten the public as to our most pressing needs?

The physician, in order to practice his profession in our state, must, in compliance with the statute, have graduated from a reputable medical college and must further appear before a district board of medical examiners, whose duty it is to pass on his qualifications to practice medicine. An osteopathist, a spiritual or mental healer or Eddyite can, with practically no preliminary preparation and with an absolute immunity from any examination as to his fitness, treat any disease or injury in the domain of medicine or surgery. I protest against the discrimination of requiring the medical man to prove his fitness and placing no restriction on those who are obviously unfit from lack of scientific attainment to practice medicine in any of its branches.

Not less far reaching in its baleful effects is the sale and advertising of patent nostrums throughout our state. I admit the handicap that our profession labors under when it denounces a patent nostrum or appliance of any kind, and from personal experience I am aware of the motives that are attributed to us. But it is no less our duty to make some personal sacrifice and try to create a healthy public sentiment that will protest against this growing evil. In battling with this evil we shall find as our opponents some of our most prominent national legislators, some of the executives of our principal states, the clergy and men and women of every sphere and station in life. That these people, with their pure and irreproachable intentions, will endorse patent nostrums and quackery that are in most cases not only useless, but positively dangerous, can only be explained on the ground of their ignorance of the evil consequences. Thus we see that it is not only the masses, but the educated and well informed who need to be protected from the results of their own folly.

I protest against the assistance that is accorded quackery by the entire press of our country. I believe that with a very few exceptions newspapers throughout this land will lend their advertising columns to the teaching of doctrines known to be false and for the promotion of the sale of drugs and appliances that are only intended to be used for criminal purposes. Men who are recognized and admitted to be quacks and impostors can, for the slightest compensation, secure the co-operation of and completely subsidize our press for the purpose of defrauding the public, and thus endanger the health and life of a community. That through the medium of the press charlatanry thrives is best evidenced by the fact that as a business proposition the efficacy of newspaper advertisement is recognized by quacks and their patronage continues unabated. Abortifacients of all kinds are daily brought to the attention of the public through the medium of the press; and when a paper knowingly advertises any drug or measure which on the face of it has for its purpose the accomplishment of a crime, judged from every law of morals, the proprietor of that paper is guilty of complicity in crime. That they salve their consciences and excuse their complicity by disowning responsibility for the results of what they term legitimate business, is but a puerile plea and is an admission on their part that for a monetary consideration the columns of their paper are open for any fraudulent accomplishment that is without the pale of the law. If the physician in his practice should advocate the employment of the drugs that are with full license advertised in our press it would be regarded as not only a violation of our statute, but of a higher ethical and moral law as well. What the physician can not and would not do is with impunity accomplished through the advertising columns of our papers; and though it is well understood that death is a frequent result of this disgraceful newspaper complicity, their columns continue to reek with this criminally vile, obscene and noxious effluvium. The efforts and teachings of a hundred thousand physicians are set at naught by this very pernicious practice, and yet it continues unabated. The responsibility is saddled on the ignorant people and the demoralizing and often sad spectacle which we as medical men witness as a result of this disgusting abuse, is set aside by the newspaper proprietor as something aside from his province and unpleasant to contemplate.

As sacred a duty as that we owe the public is that duty we owe our fellow practitioners, and he who isolates himself from his professional workers and is left to his own devices and endeavors, robs himself of the sweetest and most comforting reward of his efforts. To our medical societies is due a full measure of thanks for the spirit of good will and harmony that pervades our ranks to-day. Through their medium we are brought to realize the importance of unifying our interests, to think and act in common, and are taught to feel our mutual dependence on each other. In the hands of no others is a physician's reputation so safe as in the hands of his fellow workers. A physician's whole life is but the history of his accomplishments and endeavors, and no one can so sympathize with his efforts as his confrères.

We watch the physician as he begins his career; the shadows are long in the west, life, strength and commendable ambition are his and roseate dreams fill his fancy. Though alternately elated and disheartened by his successes and failures, he finds with each passing year a more complete reward for his honest efforts. But no matter what might be the measure of his success there is no reward to him so wholesome and pure as the hearty handshake, the friendly nod and blessed words of approval of an older physician. We follow him still further in life's great battle. Throughout every turmoil and strife the physician is found and his presence is inseparably linked with men's greatest sorrows and most perfect joys. Success as a physician may have crowned his efforts, popular adoration may be his, and the world unites in according him just praise for his accomplishments, yet no popular applause, however loud, can overrule the judgment of his fellow workers. Without their friendly council, good will and approval his success will count as naught and his life and reputation will be only a glittering fraud. We follow him still further as he stands in the dim shadows; his race is almost run; the best days of his life, his strength and vitality have been freely given for the betterment of his fellow man, and now the "frosty fingers of time have touched him and turned his locks into a snowy crown." Yet better than the contemplation of his past success the brightest star in all his firmament is the seal of approval set on his life by the members of his own profession.

Until medical men can live together in harmony and concord, until they learn to recognize and admit the good, and cover with the cloak of charity the faults of their fellow workers, then only can they prove their worthiness of the perfect trust and confidence of the laity in their altruism and disinterested motives. I acknowledge with deep humility that we are too prone to turn a willing ear to the tongue of slander and too prone to doubt the honor and purity of those who are most entitled to our perfect confidence. Yet I believe that our profession is on a more exalted plane to-day than ever before, and dissension has no rightful place in our ranks. Every discordant note that emanates from our medical societies and every estrangement between members of our profession serve but to justly disparage us in the public mind and lessen the respect and confidence that is accorded us.

There are most respectable citizens in our profession who are not members of our medical societies and whose standing among medical men is not what it should be, yet these men have in them all those elements which go to making reputable physicians. We owe it to our profession to use our utmost endeavor to induce these men to abandon their selfish and isolated course and to identify themselves with our association. There would be a mutual profit that would ensue to all in consequence of this, and a fraternal communion with men of exalted ethical principles would make of these men useful and honorable members of our body. With an increased knowledge of their fellow workers and increased appreciation of the commendable purposes of our association they would become better men and better physicians and, "like the stained web that whitens in the sun, grow pure by being purely shone upon."

In improving the tone of our profession we advance our material interests by proving to the public our worthiness of their trust and confidence. Merit and genuine worth will not long remain unrecognized and our only hope for a full recognition of our political requirements is based on a strict observance of professional ethics.

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CHOREA AND RHEUMATISM.

Probably no subject in medicine has been more discussed in recent years than that of the possible etiologic relationship between the simple chorea of childhood and acute articular rheumatism. Nevertheless, there is at the present time no subject in which there is more need for clinical observation and for the collection of valuable statistics by the general practitioner than in this problem of the possible connection between these two very familiar affections. At the recent meeting of the British Medical Association two meetings of the Section on Children's Diseases were taken up with the discussion of chorea and rheumatism, and some of the best special authorities in pediatrics took part in it. The report of the section meeting in the *British Medical Journal*[1] shows that while there is an almost universal agreement that chorea and rheumatism are frequently connected, it is now generally admitted that it is more because rheumatism is an infectious disease, with a liability to affect serous membranes, and consequently those of the brain also rather than because some specific action of the presumed microbe of rheumatism acts on the nervous system and sets up the convulsive movements we know as chorea.

Dr. Lees, in opening the discussion on rheumatism and chorea, said that while attacks of chorea are, in his experience, preceded by rheumatism less than once in three times, subsequent attacks of rheumatism occur in chorea patients in considerably more than one-half the cases. An attack of chorea, then, would seem in a sense to be the equivalent of an attack of acute articular rheumatism occurring particularly during the growing period in childhood when the nervous system is under the strain of a constant effort to keep up with its duty of providing innervation for the growing body. In the great majority of cases, Dr. Lees is inclined to consider chorea as a form of cerebral rheumatism. It is thought to affect not only the serous membrane, but also portions of the cortex, hence bringing about the explosions along motor nerve tracks that lead to the characteristic convulsive movements.

Following out this principle of the equivalency of rheumatism and chorea, Dr. Lees has found that the best possible remedies for chorea are the salicylates in what would ordinarily be considered forbiddingly large doses. He gives ten grains of sodium salicylate, with double this amount of sodium bicarbonate every two hours during the day and every three hours at night, so that the child gets altogether ten doses of the two remedies. The original hundred grains of sodium salicylate thus given each day is gradually increased to 150 grains a day, and finally to 200 grains, unless symptoms of salicylism, and especially the deep inspiration simulating the air hunger that occurs so often in diabetes should be noted. Without the combination with the alkali, salicylic poisoning is much more apt to occur, and seems to take the form of the so-called acidemia of diabetic coma.

Not many of the prominent English pediatrists would agree with the suggestion to give salicylates in such large doses as this, and Dr. Ashby, for instance, while confessing that chorea is very frequently associated with rheumatism and consequently should be helped by salicylic remedies, added that undoubtedly many cases of chorea would be seriously injured by large doses of such coal-tar products. He called attention particularly to the fact that chorea not infrequently occurs in overgrown anemic girls, apparently as a consequence of the lack of control over the motor nervous system in conditions in which the blood is lacking in important constituents. In these cases the salicylates are not only not advisable, but are absolutely contraindicated, quite as much as they are in cases of rheumatism after the acute febrile painful stage has passed and the patient is suffering from the intense anemia which develops so rapidly in many cases of acute articular rheumatism.

Dr. Poynton suggested that chorea is practically always due to a microbic cause. The microbe found in many cases is of the streptococcus group and resembles organisms known to occur in rheumatic conditions. Pure cultures of this microörganism when injected into animals have been known to produce choreic movements, and in certain cases also have given rise to joint lesions. These discoveries point to the fact that chorea is due either to focal lesions in the central nervous system of patients or to the fact that the toxins in certain persons whose nervous systems are not in stable condition have a selective action on the motor tract that leads to the nerve explosions represented peripherally by the choreic movements.

As a matter of fact, however, the whole discussion brings out the practical conclusion that the absolute connection between rheumatism and chorea is not yet demonstrated. One unexplained fact of great interest is that while rheumatism is more common in males, chorea is more frequent in females. Neurologists, too, point to the thoroughly accredited observation that a serious fright or some severe emotional strain may be followed by a frank attack of chorea which runs just the same course as the corresponding affection that occurs apparently as the equivalent of an attack of rheumatism. That there is some connection between infection and chorea there is very little doubt, though the infectious material is by no means necessarily limited to the so-called rheumatic group. Other children's diseases may have as a sequel an attack of chorea and even such simple infections as a furuncle, or a whitlow may be followed by a regular attack of chorea. In a word, the subject is still open for significant observations, and as practically every practitioner is in a position to secure valuable data for the solution of the problem, it remains one of the most interesting in the field of clinical medicine.

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[1] Brit. Med. Jour., Aug. 29, 1903. Abstract in The Journal A. M. A., Sept. 19, p. 750.

SUGGESTIVE THERAPEUTICS V. HYPNOTISM.

The recommendations of the Mendel Commission of 1902 as regards the use of hypnotism are combated by Forel at considerable length.[1] He holds that hypnotism has a proper and very important place in therapeutics, and that its legitimate use should be a part of the instruction of the medical student. The lack of this he apparently considers a serious defect in the medical education of the day. The Journal has expressed its opinion at various times in regard to the therapeutic use of hypnotism, and, notwithstanding the high authority of Professor Forel, we can not agree with him as to its importance. We do not, of course, mean here to imply that suggestion is not of importance: suggestion in some way or another, consciously or unconsciously, is daily employed by every physician, and is the sole basis of the success of the Dowieites, Eddyites, etc. It has its limitations, however: there are limits to normal suggestibility, and it is altogether possible that even waking suggestion may have its perils in special cases. Nevertheless, it is a subject that deserves to be more studied by the profession, and when it can be used honestly it will often be found a valuable aid in treatment of a special class of cases.

It is not necessary or even expedient that because it is used successfully by humbugs that we should adopt their methods. No honest physician could pretend to the special magnetic or divine power which is the essential element of the success of charlatans of the pseudo-religious and mind cure variety. The final, as well as the immediate, results must be considered. Hypnotism, as we understand it, is another thing, though Forel considers it the same. The difference is more than one of degree; it is practically the difference between somnambulism and the waking state; hypnotism is a sort of induced trance state or somnambulism, and this is a pathologic rather than a normal condition. Hypnotism, as it is generally understood by the profession, and we believe the understanding is a correct one, is very much more than suggestion; it is the abnormal excitation of hysterical disturbances of consciousness and even what we may call epileptiform conditions of amnesia and, in some cases, double consciousness. Forel is hardly frank, therefore, when he says that sleep is a useful element in treatment, and our adding more or less of it to suggestion is legitimate; hypnotic trance conditions are not abnormal physiologic sleep, nor are they used as such by hypnotic therapeutists to any extent. Nor do we believe that he is correct in calling hypnotism harmless; its dangers have been repeatedly illustrated, and we think they often outweigh its possible advantages, even in skilled hands.

The history of hypnotism itself shows how little it can be relied on. It has been before the profession for the better part of a century, has had many advocates fully as enthusiastic as Professor Forel, and, while he and the other later investigators unquestionably understand it better and utilize it more scientifically than their predecessors, nevertheless they have not gained for it a satisfactory standing with the scientific medical profession, as the report of Professor Mendel's commission shows. The profession is, we believe, more than ever awake to the importance of suggestion, not only on account of the possibilities of its legitimate use, but also on account of its constant employment by quacks and impostors. It leaves hypnotism largely alone, and the number of those who employ it will, we think, be less in the future than in the past. It will doubtless continue to be employed by some special workers who will claim its advantages as they have in the past, and it will probably be useful in a limited number of cases, but we should dread to see its popularization as a therapeutic method. That Forel, Bramwell and others have seen no special bad effects from their careful and skilled use of hypnotism does not prove that it would not be a peril in other hands. Moreover, there is always in our minds the possibility that they do not look on the subject with an altogether impartial eye. That there have been serious effects from hypnotism is undeniable; many cases have been reported, notwithstanding the fact no one would naturally like to report evil results from such measures employed for therapeutic results. We believe that the opinion of the German Commission should carry more weight than the utterances of special advocates and enthusiastic workers in this special line, however eminent they may be.

THE DOCTORATE OF PHILOSOPHY IN MEDICAL SCIENCES.

Science recently published a review of the doctorates of philosophy conferred by American universities during the past six years which reveals some facts of interest in connection with medical education. Two hundred and sixty-six doctorates were conferred last year, which is the greatest number of any single year, but there is little evidence of growth in the numbers for the past six years, which are in order 234, 222, 239, 253, 216, 266. Doctorates in medicine are by no means the only ones that are "milled," for it was found that one unknown "university" in Indiana led all others, with a total of forty-five "Doctors of Philosophy." As this institution has no productive funds, and its total income from all sources was $4,500, the production of such doctorates at a cost of $100 a piece, not to mention the other degrees, makes its position decidedly unique. Needless to say, *Science* has not included these *forty-five "doctors."*

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[1] Muenchener Med. Wochen., August 11.

Four-fifths of the degrees are conferred by seven universities, ranking in order as follows: Yale, Chicago, Harvard, Johns Hopkins, Columbia, Pennsylvania and Cornell. Just about equal numbers of degrees were awarded in science and in the "humanities," and what may seem astonishing to the scientist, there has been no appreciable gain by science on humanities in these past few years. Of particular interest to us, however, is the following table:

DOCTORATES CONFERRED IN THE SCIENCES.

	1898	1899	1900	1901	1902	1903	Total.
Chemistry	27	32	26	28	26	33	172
Physics	11	7	15	23	12	14	82
Psychology	18	15	9	13	8	16	79
Zoology	12	11	11	15	16	12	77
Mathematics	11	13	11	18	8	7	68
Botany	11	11	12	8	11	9	62
Geology	6	5	5	10	6	10	42
Physiology	4	1	4	1	8	8	26
Astronomy	3	2	4	5	2	4	20
Education	0	5	8	2	1	2	18
Sociology	0	5	3	3	4	2	17
Paleontology	0	4	2	1	0	2	9
Bacteriology	0	1	1	1	1	3	7
Anthropology	2	0	2	1	0	1	6
Anatomy	0	0	0	1	0	4	5
Agriculture	0	0	0	0	2	2	4
Engineering	0	0	0	1	0	3	4
Mineralogy	0	2	0	0	1	1	4
Pathology	0	0	0	0	0	3	3
Meteorology	0	1	0	0	0	0	1
Total	105	115	113	131	106	136	706

Here there is shown a most gratifying increase in the degrees in medical science. Physiology has graduated sixteen doctors in the last two years, against ten in the four years preceding. Of seven degrees in bacteriology three were given this year, while four of five degrees in anatomy were also given this year. Pathology makes its first appearance in the list with three degrees, although from a perusal of the titles of all the doctorate theses in science it seems that two of the three are really in bacteriologic subjects. This growth of degree-giving in those biologic sciences most intimately related to medicine is to be attributed to the growth of the spirit of a higher medical education, and is one of the encouraging signs of the times.

That anatomy and pathology have not been taught before in a way that might lead to graduate students taking them up as branches to be followed through the long stretches of labor that are required for the doctorate is regrettable, but that they are now considered as full departments of university work marks a much desired progress in medical education.

REMARKABLE FECUNDITY.

It is stated by one of our British contemporaries that a petition has been presented to the Italian government for a pension in favor of Signora Magdalena Grametta, who during twenty years of married life has been the mother of sixty-two children—fifty-nine boys and three girls. The details are not given, but before one would care to estimate the value to the state of such hyperfecundity, it would be interesting to know how many of these children survived. If the example were to be extensively followed, Malthusian ideas would undoubtedly become popular. The fact is an interesting one, however, in view of the allegations that are made as to the decreasing fecundity of the race in some countries. There seems to be no such defect in Italy, at least in exceptional cases.

KOCH'S RECENT EXPERIMENTS ON BOVINE TUBERCULOSIS.

Koch's experiments on the immunization of cattle against tuberculosis, which have been carried on for two years past, are reported by Neufeld.[1] The results of these experiments, the latter asserts, confirm Koch's statement of the non-identity of human and bovine tuberculosis, in fact, give the key to immunization research. It was possible in animals which were only capable of being affected by one toxin to produce immunity to this toxin by previous treatment with the other. The experiments were made with goats and asses, and later carried on in cattle. Some curious results in regard to the toxic dose of extract of tubercle bacilli were noted, but these will be described more fully in the abstract of the paper to be given in our next number. They find it impossible to produce immunity in guinea-pigs. The problem of producing immunity in man is somewhat different, but the results of these experiments are hopeful in their indications. The article is an interesting one and will undoubtedly receive considerable attention.

THE BRAIN WEIGHT OF THE JAPANESE.

It is not very long since someone stated, and the statement was generally quoted by the daily press, that the Japanese possessed the greatest brain weight of any modern race, and the natural inference was drawn that they would in time show their mastery. We have had few accurate data on which to base such a statement, and the one made may be taken as not specially authoritative. Recently, however, Professor Taguchi has been studying the brain weight of the Japanese and has given figures of the examination of some 597 subjects, which figures are analyzed by Dr. E. A. Spitzka in the last issue of *Science*.[2] Spitzka finds by these statistics that the Japanese certainly do show very respectable brain weights. He has used Professor Taguchi's data as to the relation between brain weight and stature, and, while the methods of tabulation differ to some extent, he finds that they correspond very closely with the figures given for the Germans, and are a little less than those given for the Szechs, as reported by Matiegka from some 306 specimens examined. Calculating also the number of grams per centimeter of the stature, the relative brain weight is about the same in the races mentioned, and only in the very small Japanese individuals is the ratio high. The relation of brain and body weight is not a reliable method, as Spitzka points out, since the mode of death and other factors materially influence the statistics. The figures seem to show that the brain of the Japanese grows more slowly in infancy and early youth than it does in the European, but the adult brain would compare favorably with that of the European of the same stature, and may be shown to be superior in this respect to other races of the same general stature. Spitzka suggests that the facts are not of a little significance in relation to the recent progress of the Japanese.

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[1] Deutsche Med. Wochen., Sept. 10, 1903

[2] Science, Sept. 18, 1903.

SUICIDE IN THE UNITED STATES.

THE JOURNAL has previously noticed the communications published by Mr. Frederick Hoffman of the Prudential Life Insurance Company in the *Spectator* on the subject of suicides in the United States. In that journal, August 27, he gives a review of the suicide records of fifty of the principal cities in this country for 1902, with a comparison with the ten years preceding—1892 to 1901, inclusive. The record shows an increase in the rate during the year in twenty-eight towns, a decrease in twenty-one, and in one small town only was the ratio unchanged. The total gives the decided increase of from only twelve in 1890 to over seventeen per 100,000 of the population. Another table shows that the suicide rate has increased during the past thirteen years from twelve per 100,000 in 1890 to 1902. The gradual progressive increase would indicate that a still higher ratio may be reached in the future. To still further illustrate the importance of the subject Mr. Hoffman tabulates the suicides in New York City from 1804 to 1902, showing a marked increase during the last twenty years, though previous to that time there had been a fall which was quite marked between 1842 and 1868. The suicide rate during the first quarter of the century was much higher than during the second, while in the last one-half it has gone far beyond the earlier figures. What these figures indicate is perhaps a subject for some speculation; the great increase of urban population, the vast influence of the foreign element in our population, many of them coming from countries where suicide is much more prevalent than here, and the increasing stress of modern life and the arduousness of its conditions must all have their effect. They also show that in time of great national excitement, as during the 60's, there may be a decided fall in the suicide ratio to be made up for afterward, possibly as the later results of the special form of stress at that time. The figures Mr. Hoffman gives, as stated, are from fifty selected cities, probably those in which the suicide statistics were most available and most reliable. Still the omissions of such places as San Francisco, Denver and Kansas City are notable, and probably may have some influence on the general ratio. A large number of smaller towns are not included in the list, though fully as important and as large as some that are included. Taking it altogether, however, the statistics probably give us a fair showing as to the suicide ratio and its variations in the United States.

A CLERGYMAN'S DEFENSE OF ANIMAL EXPERIMENTATION.

While a few clergymen have committed themselves to the side of antivivisection, especially in Great Britain, there are many others of all churches who take the rational, and not the sentimental and pseudo-humane, view of the subject. Among the latter may be mentioned the Right Rev. Mgr. J. S. Vaughan, one of the most prominent prelates of the Roman Catholic Church in Great Britain. It is unnecessary for any one to bring out new arguments in favor of vivisection, but Monseigneur Vaughan puts the case, in a recent communication to an English periodical, the *Humane Review,* in a way that ought to be convincing. He says:

> Here is, let us say, an ordinary good-natured and able physician whom we will call Dr. X. His whole aim and object is to diminish pain and to allay suffering. It is not in his power to destroy it, therefore he directs his efforts to alleviate it. He knows that men are by far the most sensitive of sufferers. He knows that they are subject to certain painful diseases. He has good reason to think that a certain treatment would bring great relief, and perhaps even produce a cure. But his reasoning may be defective, and he can not ascertain with any degree of certainty whether his opinion be well founded unless and until he can test his theories by actual experiment. That is to say, he must actually apply the remedies. It is essential that he should make the experiment on a living organism of some kind. But on whom? Well, there are but two classes of creatures to choose from. He must make it either on a human being or else on a beast; either, let us say, on a sick child or on a rabbit. The antivivisectionist objects to all experiments on animals, and in effect answers, "The experiment must be made on the sick child, not on the rabbit!" And this is why we call the antivivisectionist cruel. We, on the contrary, hold that the experiment should be made on the rabbit or other beast, and not on the unfortunate sick child. Yet, on that account we are called cruel. Our reason for maintaining this view is, first, because the beast is less sensitive to pain. Secondly, because its loss of life, should the experiment prove abortive, is of far less consequence. Thirdly, because the child is our own very flesh and blood, and a member of our great human family, and has immeasurably greater claims on our pity. Fourthly, because God has given men domain over the beasts of the field.

The antivivisectionists have elevated their zoöphily above Christianity, and it is a satisfaction to have a champion of Christianity whose views of the scriptural side of the subject can not be questioned against this modern Brahminical nonsense which has nothing Christian in it. It is inhumane in its very essence. While God, as we are told by the Savior, takes account of every sparrow that falls, yet we are told in the same connection: "Ye are of more value than many sparrows"—a passage we fear the antivivisectionists would like to have blotted out of Holy Writ.

Medical News.

ILLINOIS.

Personal.—Dr. Everett H. Butterfield, Ottawa, has been reelected physician of La Salle County.——Dr. Homer A. Millard, Minonk, sailed for Germany, September 15.

Faith Cure Case Remanded.—The Appellate Court, fourth district, has rendered a decision in the case of the Board of Health of Illinois versus S. E. Peden of Centralia, who was charged with practicing medicine without a license, and who was tried twice in Marion County. He was first tried and acquitted before a justice of the peace, then before the County Court, with the same result. The State Board of Health then took the case to the Appellate Court, which reversed and remanded it on account of defective instructions, and it will go back to the County Court for another trial. Peden's defense is that his practice is simply laying on of hands, which he contends is in no sense the practice of medicine.

Chicago.

University of Illinois Medical Department.—The regular session of the College of Physicians and Surgeons opens October 1 with an address by Dr. George P. Dreyer.

Fewer Deaths.—The deaths for the week ended September 19 were fewer than in that preceding, being 496, against 504. The death rate per 1,000 per annum was 12.97 per 1,000, against 13.94 for the week before, and 13.83 for the corresponding week of 1902.

Rush Medical College.—The graduating exercises will be held October 6. The address will be delivered by Prof. Charles Scott Sherrington, the eminent physiologist of Liverpool.——Dr. Frank W. Lynch, formerly of the department of obstetrics and gynecology at Johns Hopkins University, will assume his duties on the staff of the college on October 5.

Personal.—Dr. A. E. Halstead has been appointed attending surgeon to St. Luke's Hospital.——Dr. and Mrs. Daniel R. Brower, Jr., sailed for Europe, September 22, on the *Kaiser Wilhelm II.*——Dr. James Nevins Hyde has returned after a summer on the coast of Maine.——Dr. and Mrs. R. D. Macarthur have returned from Old Orchard Beach.——Dr. E. Fletcher Ingals, who has been rusticating in Connecticut for the last two months, will return to Chicago to-morrow.

Examination for Assistant Bacteriologist.—The Civil Service Commission of Chicago will hold an original entrance examination for the position of assistant bacteriologist of the health department, Oct. 22, 1903, in room 400, City Hall. The salary attached to the position is $1,000. Those taking the examination must have been residents of Chicago for one year, and must file application prior to the examination. Application blanks may be procured by addressing T. J. Corcoran, secretary Civil Service Commission, room 400, City Hall.

IOWA.

Withdraws Resignation.—Dr. Lewis Schooler, Des Moines, has reconsidered his action taken a short time ago and has resumed the chair of surgery in the medical department of Drake University.

Physician Assaulted.—Dr. Edgar L. Bay, Eddyville, while returning from a call in the country, was struck on the head and stunned by an unknown individual, whose motive is supposed to have been robbery.

Colleges Begin Work.—Keokuk Medical College began its work for the year, September 15, with an address by Dr. Alonzo B. Hughes.——Sioux City College of Medicine opened September 8 with an address by Dr. Charles M. Wade.

Many Not Registered.—The county recorder of Woodbury County has discovered that from 10 to 20 per cent. of the practitioners of medicine in that county have not registered their certificates with the county recorder, as required by law.

Reality was Disappointment.—Because an enterprising advertising practitioner of Des Moines used a picture of the state house on his circulars and pamphlets, thereby creating the impression that his sanatorium had five gilded domes and countless windows, he has been indicted on the charge of obtaining money under false pretences.

MICHIGAN.

Press Committee Appointed.—The Wayne County Medical Society has decided to appoint a press committee, whose duty it shall be to prepare the news of the society in digestible form for the lay press.

Personal.—Dr. Robert E. Cooper, Plymouth, has typhoid fever, and has been removed to Harper Hospital, Detroit.——Dr. Jerry M. Jones, Bay City, charged with failure to report communicable diseases, has been discharged.

Communicable Diseases.—Meningitis was reported present during August at 3 places; whooping cough at 36 places; measles at 46 places; diphtheria at 49 places; smallpox at 61 places; scarlet fever at 92 places; typhoid fever at 127 places; and consumption at 226 places. Meningitis was reported present at 2 places less; whooping cough at 4 places less; measles at 39 places less; diphtheria at 6 places less; smallpox at 20 places less; scarlet fever at 4 places less; typhoid fever at 48 places more, and consumption at 10 places more, in August, than in the preceding month.

August Mortality of Michigan.—The total number of deaths in Michigan during August was 2,800, an increase of 147 over the preceding month. The death rate was 13.3 per 1,000 per annum. There were 688 deaths of infants under 1 year, 211 deaths of children from 1 to 4 years, and 697 deaths over 65 years. Important causes of death were as follows: Tuberculosis, 187; typhoid fever, 44; diphtheria, 37; scarlet fever, 16; measles, 2; whooping cough, 37; pneumonia, 100; diarrhea and enteritis, under 2 years, 386; cancer, 157; accidents and violence, 240, including 32 deaths from drowning and 7 deaths from lightning. There were 2 deaths from smallpox.

Comparative Morbidity.—For August, compared with the preceding month, diarrhea, cholera morbus, dysentery, cholera infantum, typhoid fever and inflammation of bowels were more prevalent; and pneumonia, measles and inflammation of brain were less prevalent. For the same month, compared with the average for August in the 10 years previous, pleuritis, tonsillitis, diphtheria, scarlet fever and smallpox were more than usually prevalent; and diarrhea, cholera morbus, dysentery, consumption, cholera infantum, intermittent fever, inflammation of bowels, remittent fever, erysipelas, inflammation of brain, and meningitis were less than usually prevalent. Diarrhea, dysentery, cholera infantum and cholera morbus are usually most prevalent during July, August, September and October, but these diseases were from twenty-six to forty-five per cent. less prevalent than usual in the August just passed.

MISSOURI.

Failed to Register.—The first fruits of the crusade against unregistered physicians in St. Louis were apparent when 85 practitioners were cited to appear before Judge Tracy, on September 18, to explain why they had not complied with the law.

Results of Flood.—Since August 1, 30 deaths from typhoid fever have been reported in Kansas City, and about 75 cases are under treatment in the various hospitals of the city. It is impossible to estimate the additional number of patients under treatment at their homes.

Personal.—Dr. Horatio S. Jones, Kansas City, was recently thrown from a cable car and injured his spine.——Dr. Lemuel T. Hall, superintendent of State Hospital for Insane, No. 4, Farmington, has resigned, and Dr. Frank L. Keith has been appointed temporarily to fill the position.——Dr. John M. Doyle, St. Joseph, who was operated on for appendicitis, September 9, is securely convalescent.

College Year Opens.—Ensworth Medical College, St. Joseph, opened for its twenty-eighth year, September 2.——Central Medical College, St. Joseph, held its tenth annual opening exercises, September 7. Addresses were made by Dr. Thompson E. Potter, president, and Dr. O. Beverly Campbell.——Medico-Chirurgical College, Kansas City, opened its seventh annual term, September 7, with an address by the dean, Dr. George O. Coffin.——Kansas City Medical College began its thirty-fifth year of work on September 9.

NEW JERSEY.

Medical Staff Want Interne.—The board of governors of North Hudson Hospital have decided that an interne should be secured for the institution at a salary of $200 a year. One half of this amount the medical staff has agreed to pay.

New Eye and Ear Infirmary.—A new building to cost $50,000 will be ready next year for the Newark Charitable Eye and Ear Infirmary. The building is to be fireproof, will accommodate 30 in-patients, and an unlimited number of dispensary cases.

Personal.—Dr. John C. Applegate, Bridgton, has moved to Philadelphia, where he has accepted the chair of obstetrics in Temple Medical College, and the position of obstetrician to the Samaritan Hospital.——Dr. Richard R. Rogers, Trenton, on the occasion of his eightieth birthday, was tendered a reception by 300 of his friends, and was presented with a reclining chair by the members of the city board of health.

NEW YORK.

Cornerstone Laid.—Bishop McDonnell laid the cornerstone of the new hospital being erected by the Little Sisters of the Order of St. Dominic, at Jamaica, September 17.

Temple Again.—Franklin Stewart Temple, who attained unenviable notoriety by reason of his connection with "Antonius" the faker of Buffalo, has visited Jamestown, and certain individuals who had been under his care there are now asking the police to try and locate the healer.

Personal.—Dr. Augustus G. Pohlman, Buffalo, has been appointed assistant professor of anatomy in Johns Hopkins University, Baltimore.——Dr. William L. Russell, Willard, has been appointed Medical Inspector of Institutions for the Insane.——Dr. Richard H. Hutchings, assistant physician at the St. Lawrence State Hospital for the Insane, Ogdensburg, has been appointed superintendent, vice Dr. William Mabon, resigned.

New York City.

Sold Free Antitoxin.—Dr. Anton M. Lacina, charged with selling antitoxin furnished him without charge for use of the poor, pleaded guilty and sentence was suspended.

Suicide on the Increase.—In 1902 there was 772 suicides in Greater New York. Ten years ago the number was about 50 per cent. less. Of the suicides 196 were women, 73 of whom were native-born. In Manhattan and the Bronx the suicide rate per 100,000 has increased from 14 to 22 in the last ten years.

The New Gouverneur Hospital.—Plans for the new hospital have been filed. They provide for the erection of the additional west wing to the present five-story and basement main building, also for a one-story rear extension into the courtyard, and for the erection of a two-story ambulance station, with a stable annex. The new building, when finished and furnished, will cost the city about $500,000. The additional wing and extension are to cost $250,000 and the ambulance station will cost an extra $25,000.

Buffalo.

Warning to Milkmen.—The health commissioner has sent each milkman and dairyman of Buffalo a warning note on milk adulteration and adulterants. Any milkman who is guilty of adulterating milk or cream will immediately have his license revoked.

Personal.—Dr. Matthew D. Mann has returned from the lake shore.——Dr. Irving P. Lyon has returned from the Adirondacks.——Dr. Dewitt Sherman has returned from Bar Harbor, Maine.——Dr. Irving M. Snow has returned from abroad.——Dr. John Woodruff is in the Bermudas.——Dr. Frederic Zingsheim is seriously ill with typhoid fever.——Dr. Gustav A. Hitzel has returned from Atlantic City.

Another Eddyite Death.—A girl of 14 died of diphtheria without medical attendance, having been treated by an Eddyite, and in order to comply with the law Dr. J. L. McAdam was called in shortly before death. He refused to issue a certificate, and referred the case over to Health Commissioner Greene, who has given it, with all the facts bearing on the case, into the hands of the district attorney for prosecution.

August Mortality.—The monthly report of the department of health for August shows an annual mortality rate of 16.98 per 1,000. Among the principal causes of death are: Consumption, 37; cerebrospinal meningitis, 4; cholera infantum, 57; diphtheria, 14; measles, 13; typhoid fever, 9; debility, 35; cancer, 26; apoplexy, 19; valvular heart disease, 13; pneumonia, 20; appendicitis, 11; cirrhosis of the liver, 8; diarrhea, 14; enterocolitis, 12; gastroenteritis, 15; nephritis, 23, and violence, 46. The total deaths for August, 1903, were 538, as compared to 520 for August, 1902.

OHIO.

Adjudged Insane.—Dr. Patten McConnell, Arnold, has been adjudged insane and ordered to be committed to the State Hospital.

Personal.—Dr. Francis M. Smallwood, Chillicothe, was stricken with paralysis while crossing Saginaw Bay.——Dr. Ernest C. Voltz, Chili, attempted suicide by poison recently, but an overdose saved him.

The Reeve Anniversary.—The Sisters of St. Elizabeth Hospital, Dayton, gave a dinner to the staff, September 7, in honor of the twenty-fifth anniversary of Dr. John C. Reeve's services as chief of staff.

In the Hands of the Law.—O. P. Cooper was fined $100 and costs at Uhrichsville for practicing medicine without a license. ——Dr. Maurice Smith, Massillon, was recently fined $10 and costs for failing to report births and deaths as provided by law.——Warrants have been issued at the instance of the Lorain County Medical Society for the arrest of Mrs. A. Chapel, Mrs. Eva Sokol and Mrs. Mary Miskien, charged with practicing midwifery without license.

College Openings.—Miami Medical College will open as a coeducational institution, October 1.——Ohio Medical University, Columbus, opened September 16; Dr. James U. Barnhill presided.——The forty-eighth year's work of Starling Medical College began with a clinic by Dr. Starling Loving, September 16.——Cleveland College of Physicians and Surgeons opened for the year with an address by Dr. Samuel W. Kelley, on "Medical Students I Have Known."——Toledo Medical College opened for the year on September 24.

PENNSYLVANIA.

Philadelphia.

Child Labor.—Believing that the child labor law is grossly violated in the city, Director of Public Safety Smyth has instructed police lieutenants to ascertain where children under fourteen years of age are employed in stores, factories and mercantile places.

New Building Dedicated.—October 4 formal exercises will mark the dedication of the three new buildings of the Jewish Hospital. These buildings are the Eisner Home for Nurses, already occupied; the Loeb Memorial Operating Building, and the Guggenheim Private Hospital. The latter two will be ready for use within a few weeks after their dedication. The hospital grounds comprise twenty-two acres situated on the Old York Road, containing in all fourteen buildings.

Colleges Open.—Jefferson Medical College was formally opened September 24, with an address by the president of the board of trustees, Hon. William Potter.——All the departments of the University of Pennsylvania, including the medical, were opened September 25. Provost Harrison made an address.——The Medico-Chirurgical College will open September 28, Dr. Geo. H. Meeker, professor of chemistry, delivering the opening lecture.——Class work was resumed at the Woman's Medical College, September 23, there being no formal opening address.

The Typhoid Situation.—New cases of typhoid fever numbering 82 were reported for the week ended September 19, a decrease of 53 from the previous week. Seventy-eight cases have been reported from the Twenty-first ward since August 1 The very large number of cases in this section has led to a special investigation of the cause by Chief Abbott of the bureau of health, with the resulting report that sewage conditions were in many places bad, but that, of the victims in this section, over fifty per cent. were found to have purchased their milk from one dealer. On further investigation, it was found that within the last few months three members of the family of this dairyman had had the disease. On the reasonable assumption that the milk handled by the dealer had been accidentally contaminated, he was ordered to discontinue the sale of milk until thorough disinfecting measures had been carried out.

Segregation.—A handsome and roomy brick and cement building has just been erected in the Philadelphia Hospital grounds in which are to be placed the families of patients suffering from contagious diseases, except smallpox. The patient himself will be taken to the Municipal Hospital, while his relatives are thoroughly sterilized in the new building. There are fifty rooms in the house, each ten feet square, for the accommodation of the occupants, and the receiving ward is separated from the living rooms by porcelain doors. The number of rooms allotted to a family will vary in accordance with its size, but all the families brought there will be made comfortable at the city's expense during the period of their detention. Meanwhile the home of the family will be in the hands of the board of health, and formalin gas diffused through the house for twenty-four hours. In case the patient is suffering from smallpox his family will be taken to the Municipal Hospital with him.

Phipps Institute Lectures.—The Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis has arranged for the coming fall and winter series of lectures by well-known physicians on the various phases of tuberculosis. Some of these lectures will be more or less popular in character and all will be free to the public. The auditorium of the Witherspoon Hall at Juniper and Walnut streets, Philadelphia, has been selected for the purpose, having a seating capacity of nearly twelve hundred people. A cordial invitation is extended to the profession in general to attend these lectures. The first lecture will be given by Dr. E. L. Trudeau of Saranac Lake, New York, during the last week in October, his subject being "The History of the Development of the Tuberculosis Work at Saranac Lake." The following additions to the staff have been made: Dr. M. P. Ravenel has been appointed assistant medical director and chief of the laboratory; Dr. E. A. Shumway, ophthalmologist, and Dr. J. F. Wallis, dermatologist.

Assistant Chiefs Appointed.—Each visiting physician to the Philadelphia Hospital has recently been given the privilege of sending, at times, a representative to look after his wards. Following are the assistants appointed, known as assistant chiefs; Assistant physicians—Drs. B. F. Stahl, Norman G. Gyn, John Da Costa, John H. Cruice, R. H. M. Landis, William

Pepper, H. C. Wood, Jr., J. S. Evans and J. N. Henry; assistant surgeons—Drs. W. P. Hearn, M. B. Miller, R. H. Loux, M. P. Warmouth, J. B. Carnett, D. G. Metheny and T. T. Thomas; assistant obstetricians—Drs. Stricker Coles, J. C. Hirst, P. Brook Bland, E. P. Bainbridge, W. R. Nicholson, M. W. Griscom, and A. P. Berg; assistant neurologists—Drs. A. Gordon, J. W. McConnell, L. C. Peter, D. J. McCarthy, T. H. Weisenberg, and H. Carncross; assistant ophthalmologists—Drs. E. A. Shumway, J. C. Knipe, W. M. Sweet and A. R. Renninger; assistant dermatologists—Drs. E. J. Stout, S. H. Brown and H. J. Smith; assistant pathologists—Drs. John Funke, G. McConnel and R. M. Pearce; assistant laryngologists—Drs. Ralph Butler, M. W. Hinkle and W. G. B. Harland; assistant orthopedic surgeons—Drs. T. J. Rugh and Edward B. Hodge, and assistant pediatrists—Drs. A. H. Graham, Harry Lowenberg, Charles A. Fife and J. H. McKee.

UTAH.

New Isolation Hospital.—A new smallpox house has been erected at Salt Lake City to replace the building which was burned a short time before.

Fire in Hospital.—Heroic work by nurses and attendants prevented loss of life in a fire which damaged the Keogh-Wright Hospital, Salt Lake City, to the extent of $10,000, September 15.

August Vital Statistics.—During August 72 deaths were reported in Salt Lake City, equivalent to an annual death-rate of 11.52 per 1,000. During the same period 134 births were reported. Typhoid fever was multiplied seven-fold, 75 cases being reported during the month, with 2 deaths.

School Children's Diseases and Deaths.—For the year 1902-1903 Dr. Eugene W. Whitney, Salt Lake City, medical inspector of city schools, reports 114 cases of smallpox, 142 of diphtheria, and 110 of scarlet fever. Diphtheria caused 29 deaths; typhoid fever, meningitis and respiratory diseases, each 6; digestive and heart diseases, each 5; accident 3, and scarlet fever, 2. Defects revealed by inspection were: defective teeth, 260; defective vision, 284; enlarged tonsils, 128; mouth breathing, 25, and vermin, 52. Only one out of 45 had any eye disease.

GENERAL.

Plague in Manila.—Bubonic plague is reported in Manila's environs to the number of 100 cases and 80 deaths. Cholera is prevalent in all parts of the islands.

Guest of the Section on Ophthalmology.—Dr. Simeon Snell, Sheffield, England, has accepted the invitation to be the guest of the Section on Ophthalmology of the American Medical Association at the next session—Atlantic City, June 7 to 10, 1904. This news will be appreciated by ophthalmologists.

Hawaii Wars on Mosquitoes.—The endeavor to rid Honolulu and vicinity of the mosquito scourge is being pushed. Stagnant water is being removed and the edges of all streams and ponds are being freed of vegetation to enable the fish to feed there. Public meetings are held to instruct the people in prophylaxis.

Much Yellow Fever in Mexico.—At the city of Linares, Mexico, are reported 600 cases of yellow fever. The mortality is severe. The disease has not yet reached Monterey. Quarantine is strict. Monterey protests against quarantine, but the United States officials are determined to be on the safe side. Linares is almost isolated and business is nearly at a standstill.

Smallpox on the "Sherman."—A case of smallpox was diagnosed, August 1, on the transport *Sherman* at Manila. The ship was at once disinfected and proceeded on her way to Mindanao. The ship surgeon considers the source of the infection was a suit of clothes which was issued to a private in the *Seventeenth Infantry* in the state of Washington shortly before the transport sailed. The man wore the uniform to make a call on a young woman who had smallpox, and then packed away the uniform till he reached Manila. Here he used it again and received the infection.

CANADA.

The Opening of the New Medical Buildings of Toronto.—The first session of the newly amalgamated medical faculties of Toronto and Trinity will begin October 1, when the fine new medical buildings will be opened.

Montreal General Hospital.—At the regular quarterly meeting held last week, a memorial to the late Dr. Wyatt Johnston was discussed and referred to the committee of management. The ordinary receipts from Jan. 1 to June 30, 1903, amounted to $56,540, and the expenditures to $50,728. In addition to the ordinary income there has been received during the six months legacies amounting to $18,475. Improvements have been made to the extent of nearly $3,000.

Provision for Clinical Study of Infectious Diseases in Toronto.—The medical health officer of Toronto, Dr. Charles Sheard, who is also professor of preventive medicine in the amalgamated medical faculties of Toronto and Trinity, is making arrangements whereby fourth year students in medicine will be given clinical instruction in infectious and contagious diseases. This is a step which medical students at Toronto will very much appreciate as heretofore students have had to go out into practice without ever having seen a case of scarlet fever or diphtheria.

Lady Minto's Hospital Scheme.—Lady Minto addressed a meeting of the citizens of Vancouver, B. C., September 10, in which she outlined her cottage hospital scheme. Learning of the long distances many injured persons had to journey before securing medical aid, the plan was conceived that cottage hospitals established at convenient centers would do much toward relieving this suffering and distress. The Lady Minto Cottage Hospital Fund was started and rapidly grew until at the present time eleven of these hospitals have been established, scattered from the Atlantic to the Pacific oceans. In British Columbia there are three. An endowment fund yielding $5,000 annually is looked for. Already $100,000 has been received from Toronto, Ottawa and Montreal, and but $25,000 more is required.

Vaccinations in Montreal.—The Montreal Health Department has just completed a report of much interest to the citizens of that place. It shows an enormous increase in the number of vaccinations in the past few years. In 1902 the total number of vaccinations was 96,796, divided as follows: In schools, 52,301; in factories, 44,495. Another report shows the vaccinations by years since 1878, in which year there were 3,273. In 1885, when the smallpox was epidemic there, the number was 26,150. In 1895 the number was 2,872; in 1901 the number was 36,976. A very surprising and instructive table, "Smallpox vs. Vaccination," shows that out of 503 cases of smallpox, no less than 443 were never vaccinated. The reason for there being such an enormous increase in vaccinations for 1902 was on account of the compulsory by-law requiring factories, railways, schools and public institutions to exact vaccination certificates from those they employ or receive.

FOREIGN.

Study Tropical Diseases in Africa.—Drs. Dutton, Tod and Christy, of the Liverpool School of Tropical Medicine, sailed from Southampton, England, September 18, for Africa to study the sleeping sickness and other tropical diseases in the Congo River region.

Declining Birth Rate in Prussia.—In 1876 the birth rate per 1,000 in Prussia was 40.9, while in 1901 it had declined to 36.52. That of Berlin has dropped from 46 in 1876 to 26.68 in 1901. In 349 districts the birth rate has constantly declined, while in 210 it has increased. The latter are country districts and all in the west.

Cancer Asylum at Moscow.—This new institution for cancer research—the first of its kind in Russia—was duly completed and opened September 1. It has accommodations at present for sixty patients, and will soon receive a hundred. The expense of construction was nearly $150,000, given by a wealthy Moscow merchant. The building contains operating rooms and an amphitheater for demonstrations.

International Congress for School Hygiene.—This congress will be held at Nuremberg, April 4 to 9, 1904. Communications must be sent to the secretary, Dr. Paul Schubert, Nuremberg, before December 15, 1903. On account of the *limited* accommodations of this quaint old city those intending to attend the congress are requested to notify Dr. E. Stich as soon as possible in order that quarters may be reserved for them. The fee for the congress is $5, to be paid to the treasurer, Mr. Emil Hopf, 17 Blumenstrasse, Nuremberg.

Campaign Against Malaria in Italy.—The *Riforma Medica* states that quinin was administered regularly to 923 persons in the hotbeds of malaria during 1902, and only 44, that is 4.6 per cent., contracted malaria and the cases were mild. In the corresponding groups of persons not taking the quinin, but otherwise under the same conditions, from 18 to 82 per cent contracted the disease, an average of 50 per cent. It adds that it has been officially calculated that at an expense of $8,000,000 a year it might be possible in the course of ten years to banish the last case of malaria from Italian soil.

Campaign Against Charlatans in Germany.—Magdeburg, Germany, has had 29 suits against charlatans in the courts during a single year recently. The charge was swindling in 10, personal injury in 2, death from criminal practices in 1, assumption of an unjustified title in 3, and infraction of the police regulations in the remainder. The Prussian and other states have decided to hold the advertisement editors of the press responsible for charlatan ads which promise cures impossible to realize or advertise articles known to be injurious. The editor of the *Osnabrücker Tageblatt* was recently summoned and fined $1.25 on two counts. One was for publishing an ad which lauded a truss without a spring, under the heading "No more hernias." The other advertised a certain eye water for weak eyes claiming that glasses would not be needed longer after two to four weeks' use of the water. The cases were appealed and the higher court confirmed the constitutionality of the decisions. The Carlsruhe board of health has issued a warning to the public in regard to a powder advertised to cure epilepsy in three days. It stated that the powder contained artemisia, which used to be a popular remedy against hysteric convulsions, but is powerless in genuine epilepsy, and that the price charged is extremely exorbitant.

Ankylostomiasis in Western Europe.—The French authorities have been conducting investigations which show that ankylostomiasis has not yet invaded France. Belgium is affected and energetic measures have been taken to stamp out the infection which was first imported into Germany and Belgium by the workmen returning from the construction of the Saint-Gothard tunnel in Switzerland. The Belgian government announced that it did not have the means to undertake prophylactic measures, and the city council of Liège, the point most affected, assumed the task in 1899. It appropriated $4,000 a year for examinations and small pensions to be given to affected persons, hoping in this way to induce the miners to declare the presence of the parasites more promptly. In addition to this, a special dispensary and hospital was established last year for those affected. This not only serves to keep the patients under surveillance during treatment, but is valuable as a means of isolating them and sterilizing the dejecta which otherwise would be a menace to others. The course at the hospital is also a training in hygienic and prophylactic measures so that the discharged patient is able to warn and instruct his comrades. The latest report from Bochum in Germany states that 50,000 out of the 250,000 miners there are affected with the parasite.

LONDON LETTER.

Report of the Commission on Dysentery and Typhoid Fever in the South African War.

In August, 1900, a commission consisting of Colonel Notter, Lieutenant-Colonel Bruce and Dr. W. J. R. Simpson was appointed to investigate the outbreak of dysentery and typhoid fever, which occurred in the South African War. It has just issued a valuable report. To Colonel Bruce was allotted the laboratory work. Regarding the various organisms held to be causative of dysentery his conclusions are mainly negative. He found no relation to amebæ or other species of organism nor any relation between dysentery and typhoid fever. Dr. Simpson fully describes the outbreaks of these diseases. He shows how the very insanitary environment as regards drainage, soil, disposal of excreta, and water-supply furnished ample sources for their spread, and points out how the flies swarmed from the latrines to the nearest unprotected food supply. The total number of cases of dysentery was as follows: first year, 11,143, with 546 deaths, a percentage of 4.9; second year, 13,131, with 427 deaths, a percentage of 3.2. Of typhoid fever there were in the first year 15,655 cases, with 3,647 deaths, a percentage of 23.2; in the second year 15,463 cases, with 2,530 deaths, a percentage of 16.3. The comparative absence of the fatal dysentery which usually attacks armies in the field was probably due to the excellent food arrangements, the soldiers obtaining their rations perfectly fresh and thoroughly cooked. The chief cause of dysentery was probably the drinking of surface water, especially the water of rivers, such as the Orange and Modder, holding in suspension a large amount of organic matter. Dr. Simpson points out a defect of organization: there was no specially trained and organized executive by which the recommendations made to the commanding officer of the various units could be carried out. This was the result of the persistent ignoring, as far as possible, of the medical corps by the military authorities. Dr. Simpson recommends that the medical corps should be divided into (1) a medical branch and (2) a health branch, and that the latter should be specially trained in preventive medicine.

The Anti-Mosquito Campaign in Egypt.

Major Ross has received a report that the anti-mosquito campaign, commenced less than a year ago by the Suez Canal Company (referred to in The Journal) and carried out according to his instructions, has been remarkably successful. The town of Ismailia is practically free from mosquitoes, which only a short time ago were very abundant. Even mosquito nets can be almost dispensed with, and people can sleep without being bitten. Two marshy swamps on the northeast of the town have been filled up with sand and a third one will soon be dealt with. It will be drained by a pipe 22 cm. in diameter which will convey away the water. A gang of 180 men are employed in filling up pools, moving the coarse grass and undergrowth, and clearing the numerous small channels in connection with the main canal. When they first commenced operations they were worried by swarms of mosquitoes toward evening, but scarcely any are seen now. The statistics of malaria in Ismailia show a remarkable improvement. From January 1 to June 30 of this year there were only 3 cases in hospital, against 52 for the same period last year and throughout Ismailia there were 569 cases from January 1 to May 30 in 1902, against 72 for the same period of this year.

Report of the Royal Commission on the South African War.

This report, which has just been issued, may be regarded as the last word on the so-called "hospital scandals," which caused so much sensation during the war. It clearly shows that before the outbreak of hostilities the military authorities overruled the demand of the surgeon-general for more men. He represented to them that the medical establishment was not even equal to the requirements of peace. When the war broke out practically the whole of the Army Medical Corps, officers and men, was exhausted in supplying the First Army Corps, and in manning the base and stationary hospitals. When, therefore, the Second Army Corps followed, assistance had to be obtained from civilians. Altogether 8,500 men were sent out, but barely a quarter of these were trained Army Medical Corps men. The commissioners attempted to obtain an idea of the percentage of medical strength which a force in the field required. Professor Ogston, who had studied the statistics of modern wars, said that the Medical Department should form about 5 per cent. of the strength of a force, but Surgeon-General Jameson thought that under favorable circumstances 2½ per cent. was sufficient. This was the percentage adopted by the War Office before the war. Including voluntary and outside assistance the medical strength during the war seems to have been from 3 to 4 per cent. of the total forces. The difficulty was in a war conducted over so large an area to secure that the medical personnel should be distributed in accordance with the need of localities or occasions. The most notable example of failure in this respect was the outbreak of typhoid fever at Bloemfontein. One great defect was pointed out: the army surgeon in times of peace had very little opportunity of acquiring surgical experience. The British system was unfavorably contrasted with the German. In Germany the military hospitals are larger and better managed, and every army surgeon can apply at short intervals to be admitted to the practice of civil hospitals. It is believed that the recent sweeping reforms in the service will remedy these defects.

Correspondence.

Health Resorts—The Patient—Home and Resident Physicians.

Hot Springs, Ark., Sept. 5, 1903.

To the Editor:—The number of people visiting health resorts increases yearly. Among them are those suffering from chronic ailments and whose search is strictly for health; in such cases the question arises, how and under what circumstances will the patient derive the greatest benefit? Without a doubt the attending physician at the patient's home has the key to the situation, and it is on this basis that I formulate my deductions.

Dr. James K. Crook, in an article read before the section on general medicine of the New York Academy of Medicine, May 20, 1902, stated that we have within our borders springs that equal and excel those of Europe, with the exception of the *sulphated salines*, yet this is a matter not generally known, and one to which but little attention has been given by the general worker in medicine. Frequently is it the case that after a patient has been a sufferer for a long time with some chronic malady that a change of climate, surroundings, probably the advisability of a stay at a health resort are considered, either by the patient, the physician, or by both. It is at this time that the physician's help is most needed, his knowledge of the case reinforced by the perusal of literature on health resorts should make him, not the patient, the dictator. The climate, natural advantages, conveniences, and any special virtues of a resort should be thoroughly inquired into and if literature on this subject is not at hand, correspondence with physicians at the contemplated resorts will elicit what is sought after.

Without entering into any detailed discussion I will try to formulate a few definite rules that will tend to give the patient the greatest and best results obtainable:

1. The home physician and the patient should consult on the advisability of visiting a health resort as carefully as the first consultation on the case.
2. The physician should designate the resort to which the patient is to be sent, but only after a careful review of the benefits to be obtained.
3. The home physician should then correspond with a physician residing at the resort chosen, stating the case and requesting any information that may be of value.
4. On sending the patient, he should be given a letter to some resident physician. The case history up to the time of the patient's departure should be concisely and accurately stated, citing advantages and failures of various treatments, any especial idiosyncrasies of the case, etc. This answers the purpose of a consultation for the good of the patient and will frequently prevent the loss of valuable time to the latter and avoid the retracing of work that has proven a failure.
5. The resort practitioner must strive in conjunction with the home physician, through the history sent him, to give the patient every advantage of Nature's resources.
6. When the patient returns, an accurate account should be sent to the home physician, giving full details, so the latter may be thoroughly acquainted with the treatment had while away.
7. The two physicians should work in conjunction on all cases during the patient's stay and the one principal point, the welfare of the patient, should never be lost sight of.

If the above rules were more carefully adhered to, fewer invalids would take it on themselves to seek for health at some resort chosen on a mere empirical basis. The resort physician would thus be placed in immediate contact with the case, and as the question of confidence in the former by the latter is of paramount importance, an advantage point is already gained, the value of which is unmeasurable. It would tend to place our resorts on a higher standard, and before the expiration of a great while the value of a perfect understanding for the good of the patient would be as well recognized here as abroad.

It is the duty of every physician to assist and strive for the welfare of his patients; why, therefore, if they insist and feel as though benefits might be derived elsewhere, does he allow them to go unrecommended and unprepared? The American Medical Association has gathered within its ranks many of the reputable physicians of this country; the present standard of requirement of admission should certainly be sufficient evidence of the good character and professional attainments of its members; every resort in this country is represented by some physicians affiliated with this Association, and the acquiring of the names is but a matter of a few days at most. We all owe our patients our best judgment, and what has been stated above is certainly not a shortcoming in that respect. William F. Bernart, M.D.

218 Central Avenue.

The Commission Evil.

Milwaukee, Sept. 1, 1903.

To the Editor:—Owing to the vital question of professional ethics involved, the enclosed correspondence may be deemed worthy of reproduction in your pages.

H. V. Würdemann.

——, Aug. 19, 1903.

Dr. H. V. Würdemann, Milwaukee, Wis.

Dear Doctor:—I have a male patient 58 years old coming to my office with inversion of both eyes, the disease has become very chronic (Right eye) the upper lid has five rows of displaced lashes and he has lost all power to open this lid. the left is not as bad and its seem to me there is shrinking of the conjunctiva from chronic disease, Especially trachoma The sight is fairly good of both eyes, now what in your opinion do you think it would cost him, and what per cent will you give me if I send you all the eye cases from out this way? The reason why I want to know about what it cost these farmers is so I can tell them beforehand to get the money ready, Yours Respt.

(Signed) ——

P. S. Let me hear from you soon.

Milwaukee, Aug. 24, 1903.

Dr. ———.

My Dear Doctor:—Your letter of the 19th inst. received. On account of the two *business* questions raised in it, and as I have been approached in like manner before, I have taken some time to formulate a proper answer. I intend that this correspondence shall be published for the benefit of other young physicians who might ignorantly at some time raise the same question to their personal detriment.

From the description of your case I think that the eye condition is entropion of the lids, resulting from the cicatricial stage of chronic granular conjunctivitis (trachoma). Plastic operations on the eyelid will probably relieve the entropion.

It would not be fair to either patient or physician to give an estimate of the cost of the work without proper examination. As you well know, professional fees are regulated by several factors: Kind of services rendered, amount of time consumed and the financial standing of the patient. Thus there are no fixed fees for services; the only professional and legal requirements being that they be reasonable and such as are customary with physicians of the class to whom the consultant belongs. Customary office consultation fees in this country range from $5 to $25, depending on the standing of the consultant, as well as the above-named factors.

The above would be a sufficient answer to your letter were it not for your question: "*What per cent. will you give me if I send you all the eye cases from out this way?*" I take it for granted that you consider this question quite correct and honorable! I beg, however, to answer it curtly and completely:

The presumable reason why one physician refers a case to the care of another is that he is either unable or unwilling to give proper attention to the patient and sends him to the other's care purely for the patient's good and not as a business transaction.

The giving or acceptance of commissions by physicians (or other people) for sending patients to consultants is an unethical and dishonest act, which has not been tolerated by true physicians from the days of antiquity. It is *dishonest*, because the patient is deceived, and the collusion is more dishonorable than commission business between the doctor and druggist, which has long been frowned on by both the profession and laity. It is a *cowardly* proceeding if either of the doctors are afraid to let the patient know for what he is paying, that which he has an ethical and legal right to know. *The medical profession is not a trade*, and division of fees without the knowledge of the patient would be degrading the whole profession to the trade level.

I am not practicing medicine as a business, but as a profession, and while I am entitled to a fair fee for the knowledge, time and labor expended on the case, I can not stoop to the tradesman's means of hiring drummers to get me patients. Your proposition would degrade you to a "hired man" or "barker" for the quack who might accept.

You may have, in some instances, spent time in caring for or in accompanying a patient to the consultant's office and felt delicate about submitting a bill for same—why—that is pure cowardice, the laborer is worthy of his hire!

On account of his financial condition your patient may not be able to pay the usual fee of the consultant or surgeon, yet you feel that you are entitled to some payment for such services as above stated. The matter is easily arranged; the patient has but to explain his circumstances and the consultant should be willing to reduce his fees so that the family physician may get some payment, but *all this must be done with full knowledge and consent of the patient.* I am always willing, when necessary on account of the financial condition of the patient, to reduce my bill enough, even to giving my services gratuitously to allow them to pay you, but I will not pay you a part of my fee because you are afraid to demand it of the patient.

In conclusion, I am willing to do any special work for you for what is a customary fee among specialists of my standing, for patients able to pay same; for others who can pay but little I am willing to do the work for the proportion of the usual fee they may be able to give me after paying for your services; and in cases unable to pay anything, I will cheerfully do the work without monetary recompense on your recommendation; but I will not hire any medical "barkers" to drum up trade. My strongest reasons, aside from the ethics of the case, for refusing your request is that I value the esteem of the general profession more than a business which I could not retain, if I abandoned the customs and ethics followed since the days of Galen, yea, even from those of Æsculapius. Yours very sincerely, H. V. Würdemann.

The Visiting Physician in Berlin.

BY DENSLOW LEWIS, M.D.

CHICAGO.

It has been suggested that I give a little common sense advice which may help the medical man in Berlin to utilize to the best advantage the exceptional clinical material that is there placed at the disposal of every student. I have just returned from a year's residence at that university, and at former periods of my life I have been privileged to study four years in other European cities. This experience may not entitle me to speak by the card, but at all events it authorizes me, I trust, to express views based on actual knowledge of conditions—views which are not founded on the superficial observation of a casual visitor.

To plunge *in medias res*, let me advise every one first of all to learn the language. All German medical men of culture—and they are all cultured—speak and understand English and French, and with invariable courtesy they will on many occasions seek to explain matters to the foreigner in his own language. Nevertheless, they can not be expected to do this all the time, and much of value will be lost to the American visitor unless he has at least a superficial knowledge of German medical terms. Moreover, he can not get about among the natives with any satisfaction nor appreciate the real sociologic conditions unless he can talk the language to some extent.

Before sailing get a Berlitz teacher and start talking. Get Ahn's little book, too, and Waller's "German-English Medical Dictionary." It is astonishing how much can be learned in two months by studying systematically one or two hours a day. Believe me, it is well worth the while. The Latin terms for anatomic conditions and to describe diagnosis and treatment are used more frequently than by us, and the Germans are accustomed to hear foreigners speak the language imperfectly. They catch the meaning if there is half a chance.

On arrival go first of all to a hotel—on the European plan necessarily, for there is no American plan, except in *pensions*, as the boarding houses are called. Then call at Langenbeck Haus, which is the meeting place of different medical societies and the general medical headquarters, very much like the Academy of Medicine of New York. See there the superintendent, Mr. Menzer, or his wife, who will give you the catalogue of the vacation courses, and observe the notices of matters of medical interest posted on the bulletin board. Buy a catalogue of the university lectures at any book store and also a little book entitled *"Das Medizinische Berlin."* By looking over these pamphlets you will learn much regarding the different hospitals and dispensaries—called here respectively *Klinik* and *Poliklinik*—as well as regarding laboratories, lectures and demonstrations. You see at once what is offered and you are prepared to make a choice.

Now about 1 o'clock go to the Terminus restaurant for dinner. This is the meeting place of Americans, whom you will easily recognize, for they have one or two tables reserved. Supplement the knowledge already gained by the pamphlets I have mentioned by getting practical pointers from your compatriots. If you are to stay a few weeks or longer it is cheaper and more convenient to rent a room near the hospital or other institution where you intend to spend most of your time. A suitable room with the usual breakfast of coffee and rolls supplied by the landlady can be rented for two or three marks a day. A mark is a little less than a quarter, so the expense is not great. By arranging by the week or month a cheaper rate may be secured, but beware that you give due notice of your intention to vacate—the fifteenth of the month if you are to leave the first—or you will be called on to pay for an extra month. You can get board and room in a pension at from four to five marks a day. The coffee and rolls are served in your room, as a rule, and dinner is called at 2 o'clock and supper at 8 o'clock. Most Americans find it more convenient to patronize the restaurant of which the name is legion.

It is important to conform to certain customs of the country at once or you may be considered no gentleman. Even if the great influx of Americans makes a deviation from established usage less conspicuous than was formerly the case, it is preferable to show a knowledge *of* social etiquette and a disposition to do as others do. Indeed, such a practice distinguishes the cosmopolitan traveler and is accepted as a mark of good breeding. You must learn the very first day how to bow. Bring the heels together as if to give a military salute and incline the whole body at an angle of 45 degrees, letting the head drop forward. Do this right and don't think nodding is sufficient. You are expected to take off your hat to those who salute you. When acknowledging the salutation of porters, tradesmen or attachés of hotels or hospitals it is enough to do as we do at home when we salute a lady. But in Berlin if you meet a lady you will not wait for her to recognize you but as soon as she is sighted you raise your hat and, holding it at almost arm's length above your head until she meets you, you make a half circle with your arm while you utter the proper salutation appropriate to the time of day. In this manner you exchange greetings with your professional colleagues and social equals. You will not shake hands when introduced except when the German, who may know of our American custom, offers to do so.

In entering a restaurant you take off your hat and hold it in your hand until you find a table that suits you. You have the pick except when you see a placard with the word *"Bestellt,"* meaning reserved, or *"Stammtisch,"* or *"Für Stammgäste,"* meaning for habitual customers. There is no head waiter as at home to order you to a certain table. If there is a crowd present and you find a vacant place at a table where others are sitting, take hold of the back of the chair, gaze at the seated guests, make the bow as above indicated and ask permission to join the little company by inquiring *"Gestatten Sie?"* The men will half rise from their seats to bow to you and will indicate their permission by the words *"Bitte schoen"* or *"Bitte sehr,"* while the ladies will incline their heads and smile pleasantly at you. When you have finished and have paid the waiter, seize the back of your chair again as in Act 1, bow to the guests and say the mystic word *"Mahlzeit."* The guests will give the countersign by repeating the word or

12 *The Leucocytes in the Summer Diarrhea of Infants. John Zahorsky.
13 *The Prognosis and Orthopedic Treatment of Acute Anterior Poliomyelitis. (Concluded.) Walter G. Stern.
14 *Straight Splints in Elbow Fractures. J. Hubley Schall.

8. **Diphtheria.**—The usefulness of confirmatory cultures in diphtheria is discussed by Billings, who finds that while in a certain small percentage of cases the diphtheria bacillus fails to appear in the first cultures, the failure is generally due to a conjoined infection with the septic micrococci. Aside from these cases, the statement that the case is probably not diphtheria can be made on one negative culture up to the tenth day of the disease. Valid reasons for requesting a confirmatory culture in negative cases are: 1. Where there is no growth whatever on the culture media; 2, where there is complete contamination and liquefaction of culture media, in cases which are clinically diphtheria; 3, cases where there are suspicious bacilli; 4, in croup cases where the membrane is limited to the larynx and the duration of the disease is less than five days. Dryness of culture media, scanty growth and the recent use of antiseptics with satisfactory growth of other organisms than the diphtheria bacilli, do not alone furnish sufficient grounds on which to request a confirmatory culture. These regulations govern the system of second cultures in the diagnosis laboratory of New York City.

10. **Shock.**—Dandurant notices particularly the type which he calls the solar plexus shock characterized by a lack of symptoms, except rapid and erratic heart action and pulse. He thinks in the majority of these cases the perverted condition of the solar plexus is a factor in the production of the phenomena.

11. **Nose and Throat Operations.**—The importance of preliminary treatment for nose and throat operations under local anesthesia is insisted on by Ward, who outlines it as follows:

1. Local treatment, to free the nose and nasopharynx from mucus and relieve congestion.
2. Laxatives, diaphoretics and diuretics, to stimulate elimination.
3. Tonics, to tone up the nervous centers and restore general functional activity.
4. Atropin, to prevent reflex inhibition.

These precautions will assure less shock, prevent complications and hasten repair.

12. **Summer Diarrhea of Infants.**—Zahorsky concludes with Knox and Warfield that the leucocyte count in this condition is too variable to be of special diagnostic importance, but holds that the differential count is extremely valuable in the estimation of the intensity of the intoxication. The normal ratio of the polymorphonuclears to the lymphocytes in healthy infants is 2 to 3 or 4. In gastroenteric disease this ratio becomes changed; the leucocytes gradually increase and the lymphocytes diminish, when the ratio becomes 1 to 1, 4 to 3, etc. This predominance of polymorphonuclears, therefore, reveals an intensity of the morbid process and means that the baby is pretty sick, whatever other signs may indicate.

13. **Acute Anterior Poliomyelitis.**—The orthopedic treatment of this condition is described by Stern, who insists on the importance of treatment, if only to prevent deformity, and gives details as to tendon transplantation, arthrodesis, etc.

14. **Elbow Fractures.**—Schall advocates the use of straight splints extending from the upper third of the arm to the wrist with slight divergence at the elbow, the hand and arm being kept supine. To prevent the olecranon from becoming displaced, small strips of adhesive plaster were passed just above the fragments down and around the splint. He objects to complicated fracture dressings in injuries about the elbow, and to the extremely flexed position.

Medical News, New York.

September 12.

15 *Infantile Scorbutus. Thomas M. Rotch.
16 *Notes on Experimental Surgery. A Modification of the McGraw Elastic Ligature. J. W. Draper Maury.
17 *A Proposed Apparatus for the Treatment of Empyema. Francis M. C. Usher.
18 The Advisability of a More Definite Course of Instruction in Physics in the Medical Curriculum. Allen J. Smith.
19 Mental Therapeutics in Medicine. J. M. Aikin.
20 *Uses and Limits of Non-Physical Therapy. Smith Baker.
21 *The Significance of Albumin and Casts in Surgical Patients. John C. Munro.
22 Later Impressions of the "Non-heredity of Acquired Characters." Lewis S. Blackwell.
23 *Therapeutics of Potassium Copaibate. Louis Kolipinski.

15. **Infantile Scorbutus.**—Two cases are reported by Rotch to impress on the profession the great care that should be taken to differentiate between the advanced bone lesions of this disease and those of osteomyelitis and osteosarcoma. In the first case, three separate operations had been performed and a large portion of the tibia removed. The diagnosis of infantile scorbutus was suggested by him in consultation and orange juice recommended, followed by the steady improvement in the condition of the child. In the second case scorbutus was diagnosed as probable, and a diet of plain cow's milk and orange juice employed with excellent results, though there was very marked swelling of the bone suggesting the presence of osteosarcoma, and it had been suggested that amputation for osteosarcoma would be needed.

16. **The McGraw Elastic Ligature.**—Maury has employed the McGraw elastic ligature in such a way as to insure its "punching out," instead of leaving a linear aperture which may be broken up by adhesions. He makes a square stitch, the technic of which is described as follows:

> Decide on the size of the square desired, and, after approximating the surface, gut and gut or stomach and gut so that there may be no unnecessary tension, place a Lembert stitch of silk to join the two viscera at each of two points destined to be the diagonally opposite angles of the completed square. These stitches will hold the parts together and will serve as guides for the introduction of the ligature. The needle is introduced into one of the apposed viscera at a point selected for one of the remaining angles and brought out beside one of the guides. From here it is passed through the opposite organ, care being taken that the needle thoroughly pierces the mucous membrane—which is somewhat resistant in a dog but not so in a pig—and out again at a point diagonally opposite the starting place. From this point to the point of beginning the steps are directly reversed, viz.: the needle re-enters the first viscus, emerges at the first guide, re-enters the second viscus and emerges as nearly opposite the starting point as possible. The stitch is then just half done; two sides of the square are completed, and the arrangement of the elastic ligature may be correctly represented by a figure 8 bent in the middle. The remaining two sides of the square are completed in the same manner, care being taken to make the distal loops of the two figures of 8 interlock.

He gives and illustrates the results of experimental work with this on dogs and offers the following conclusions:

1. The McGraw elastic ligature can be so inserted as to "punch out" as large an area of the juxtaposing walls as may be desired, with at least as much certainty and with greater safety than the Murphy button.
2. That the margins of such openings are smooth and not unduly cicatrized.
3. That the elastic ligature may remain *in situ* after punching the openings, although this is less likely to happen if tied with iodized catgut.
4. That such retention in the mucosa of so soft a material is not apt to be harmful or permanent.
5. That the time required is not sufficiently increased to render the use of this technic impracticable.
6. That perhaps enough has been suggested to stimulate further research by others, so that the actual facts in these most interesting problems may shortly be brought to light.

17. **Empyema.**—The apparatus suggested by Usher consists of a metal box with a screw cap arranged for the application of suction, etc., and fastened down to the body so as to exclude air by means of rubber plaster or bandage rubber.

20. **Non-Physical Therapy.**—Baker thinks that quacks and irregulars, honest and dishonest, are defining a field of non-physical therapy, which needs investigation by the highest skill and training and promises favorable results.

21.—See abstract in The Journal, xl, p. 1669.

23. **Potassium Copaibate.**—This preparation, which Kolipinski finds decidedly advantageous, is prepared by mixing 8 parts by weight of copaibate with 1 part of potassium hydrate in a small quantity of water. On stirring, saponification results. By standing three or four days, the volatile oil stays at the top, potassium copaibate in the middle, and the lowermost layer is the residue of uncombined alkali in water. It is gelatinous at 50 F., thick and oily at 63 F., and quite liquid at 70 to 80 F. Its reaction is alkaline. It dissolves rapidly in alcohol, ether, and chloroform. It is best given in gelatin capsules in doses of 50 to 150 gr. per day. Four to twelve capsules represent the average daily amount. The average man will tolerate two capsules three times a day; robust men twelve daily, and those easily purged will not be able to take more than four for some length of time. Its by-effects are similar to those of the crude drug,

though less severe. It has all the virtues commonly ascribed to copaiba, with special ones due to its solubility, and it is more palatable than the latter. It reduces the danger of complications to a minimum so that gonorrheal bubo, epididymitis, cowperitis, prostatitis, vesiculitis, cystitis and stricture are seldom seen to arise.

Boston Medical and Surgical Journal.

September 10.

24 *Cancer of the Intestine, etc.; Its Surgical Aspect, with Report of Cases. Homer Gage.
25 *The Relations Existing Between Respiratory and Intrapelvic Diseases. Daniel H. Craig.
26 Carcinoma of Choroid Metastatic from Prostate. Allen Greenwood.
27 A Case of Carcinosis, with Secondary Nodule in the Eye. E. E. Southard.
28 Mechanical Vibration: Its Theory and Application in the Treatment of Disease. Maurice F. Pilgrim.

24. **Cancer of the Intestine.**—Gage first notices the unfavorable statistics of Fitz and then reviews the results of Korte, McEwen and Krönlein, which he thinks to a certain degree are favorable, especially in cases of ileocecal cancer. Four cases are reported by him, two of which were apparently quite successful. In 2 the acute intestinal obstruction was the first indication of the existence of any serious trouble, and he remarks that the diagnosis in these cases can not be made without exploratory incision, and when symptoms suggest a chronic appendicitis, or obstruction, its desirability is evident. If the disease, however, has invaded the mesentery, lymphatics, etc., he would not operate further, and he would confine the use of the exploratory incision to cases in which the earliest symptoms were those of acute intestinal obstruction, appendicitis and chronic intestinal disturbance where there is a clear presumption against very advanced malignant disease. As regards colostomy, while it may be useful, he thinks it can have only imperfect and merely temporary good effects.

25. **Ovarian Prolapse.**—Craig's paper makes the point that reflexes or contrecoup from above in coughing, etc., with rigid chest and abdomen are responsible for ovarian prolapse, and details some of his experiments to determine the amount of force thus produced. He finds that a pressure of 14 ounces causes complete prolapse and that the force engendered by coughing is slightly in excess of that required. The wearing of corsets has much to do with producing the bad results. He suggests that the congestion of menstruation in conjunction with that of respiratory diseases is always harmful and should be guarded against even in the nulliparous, and that corsets had better be proscribed during any severe or long persistent cough-accompanied lesion, especially during the catamenia. By requiring the patient to assume the prone position for a few minutes after violent coughing, disengorgement of the pelvic vessels is favored and gravity assists the ovarian supports. If ovarian or pelvic involvement is suspected, the pelvic respiratory massage suggested by Williams may be of advantage. This consists in having the patient assume the genu-pectoral or knee-elbow posture and aspirate the pelvic vessels by slow force-expiration about fourteen times per minute.

Medical Record, New York.

September 12.

29 *Post-typhoid Sepsis. Francis Delafield.
30 *The Joint Complications of Acute Pyogenic Osteomyelitis, with Especial Reference to the Treatment of the Purulent Forms of Arthritis. A. A. Berg.
31 Ancient Jibes at the Doctors. Jonathan Wright.
32 Some Experiences with Ichthyol in Puerperal Fever. J. D. MacPherson.
33 *The Surgical Treatment of Colitis. C. L. Gibson.

29. **Post-Typhoid Sepsis.**—Delafield illustrates cases of typhoid with relapses during convalescence, rigors, chills, etc., which he thinks indicate that at the end of typhoid fever there may come in a new infection resembling the streptococcus infection, either mild or severe. He suggests that with care this can be usually distinguished from typhoid, and the practical point is that it calls for different management. The best results are obtained if the patients are fed and taken out of bed.

30. **Purulent Arthritis.**—Berg points out the indications for operation in acute joint disease, the necessity for careful blood cultures beforehand as an essential for treatment and the importance of evacuation and drainage in case of suppuration. In the mild forms there is very little tendency to the destruction of the synovial membrane or ligaments, and septic symptoms are not severe, but in the severer cases there is more or less destruction. For the milder grades the old methods of single or multiple incision of the joint, evacuation of the exudate and drainage give very good results and may restore the joint to perfect function. In the severer cases he follows the plan of Mayo of making a transverse anterior incision through the patella into the joint, with partial dislocation of the femur and the tibia by extreme flexion and dry packing of the synovial cavity. Of course, this destroys the future function of the joint, but this can not be avoided in any case, and he suggests from his experience that good results may follow the same treatment in the other large joints, especially the elbow, ankle and wrist. In the after-treatment of arthritis immobilization of the joint should be employed until the acute inflammation subsides and then passive motion cautiously applied. Forcible passive motion is to be deprecated. For the periarthritis, the Priesnitz cold pack, combined with douches and massage are employed with satisfactory results. The pseudoarthritis and periarthritis leave no ultimate impairment of the joint function, nor do the serous, serofibrinous or catarrhal types of arthritis, though prolonged drainage of the joint for pyarthrosis is usually followed by fibrous ankylosis. This, however, varies, and he has had cases where the joint function was completely recovered.

33. **Colitis.**—Gibson's method, suggested in 1902, is briefly redescribed. It consists particularly in reproducing the technic of Kader's gastrostomy, making a valvular opening into the intestine and introducing a drainage tube through which treatment can be carried on. When it is removed the valvular arrangement completely closes it, and to obtain permanent closure of the fistula when required it is only necessary to discontinue the treatment by omitting to pass the catheter into the gut. The Weir modification of this, with the use of the appendix, has the apparent advantage of making the simple operation still simpler, but the valvular formation is wanting and the after-treatment is less agreeable. Gibson says that the results of this operation have been such as to justify the hope of marked amelioration or cure of the symptoms, while it offers the advantage that it is devoid of every disagreeable feature of an artificial anus. It calls for only a short confinement to bed. If a prolonged course of treatment is required, it may be carried out if necessary by the patient himself. A change of climate, so often beneficial, is made possible. Its performance is perfectly simple and safe. The intermuscular incision greatly reduces the risk of a subsequent hernia, and the prompt closure of the fistula is certain and spontaneous.

Cincinnati Lancet-Clinic.

September 12.

34 Intraligamentous Sarcoma of Right Broad Ligament Arising from Periosteum of Second Sacral Vertebra. J. M. Withrow.
35 Hematoma of the Ovary. P. C. Layne.
36 Surgery of Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued.) B. Merrill Ricketts.

St. Louis Medical Review.

September 5.

37 Nasal Monstrosities in Italy Before the Age of Augustus. Emory B. Lease.

American Gynecology, Baltimore.

August.

38 *Urine Changes in Pregnancy and Puerperal Eclampsia. E. L. Whitney and Clyde A. Clapp.
39 *The Diagnosis and Prognosis of Tuberculosis of the Kidney and Ureter. J. Wesley Bovée.
40 *The Value of Conservative Operations on the Uterus and Its Appendages. W. P. Manton.
41 *Suburethral Abscess, or Incomplete Internal Urethral Fistula; Report of Three Cases. C. Jeff Miller.
42 The Card System in Gynecology. H. J. Boldt.

38. **Urine Changes in Pregnancy.**—Whitney and Clapp describe elaborately their methods of urine examination, and proclaim that there is an unmistakable tendency during pregnancy for a lessened output of urea nitrogen, together with a

slight increase of ammonia nitrogen as compared with the non-pregnant condition. In eclamptic women urine analysis shows that the essential change consists in a decrease in the percentage of nitrogen which is eliminated as urea, with an increase of the amount which is precipitated by phosphotungstic acid and readily decomposed by heating with sulphuric acid at a temperature of 160 C. Unfortunately our knowledge is incomplete as to the exact nature of these substances. In some cases, they think, the loosely combined nitrogen is derived from ammonia and in others it may be attributed to some as yet undetermined antecedent of urea. The variability of the ammonia increase in the different cases is attributed to the fact of the imperfect metabolic processes, the proteid destruction not proceeding as far as the ammonia stage, while in other cases the ammonia is retained either in the body fluids or stored up in excessive quantities, especially in the nervous system. We are still in the dark as to the cause of the alteration in metabolism that characterizes eclampsia. It is possible that the hepatic function may be in some cases at fault; the fact that the urinary changes last after delivery for some time would seem to indicate that the hepatic lesions do not immediately disappear after delivery. Further study will be required to fully elucidate the question, and to determine whether these urinary changes are constant enough to be of value in predicting the occurrence of eclampsia.

39.—See abstract in The Journal, xl, p. 1526.

40. **Conservative Gynecology.**—Manton reviews his experience in 62 conservative operations on the uterus and appendages in 53 patients. There have been 94.3 per cent. symptomatic cures, 5.6 per cent. of failures with no deaths. The mortality seems to have certainly been better in these cases than with the ordinary radical operations. The general health of the patients and the maintenance of normal function of the reproductive organs are also to be taken into account. Pregnancy has occurred since in 5.6 per cent.

41. **Suburethral Abscess.**—Miller describes three cases of this condition, one apparently due to an urethral diverticulum, one possibly of gonorrheal origin, and one probably originating in Skene's glands or in one of the urethral crypts. The symptoms are principally painful urination, sensation of heat and distress. Palpation will detect the thickened edges if the trouble follows periurethral inflammation. The urethral speculum is of use in revealing the locality of the pus discharge. The treatment that he advises is surgical; prompt incision and perhaps excision of the sac. After incision of the sac, a retention catheter should be worn for a time or the bladder at least emptied at regular intervals with a soft rubber catheter to prevent contamination of the wound.

American Journal of Insanity, Baltimore.

July.

43 *Presidential Address, American Medico-Psychological Association. G. Alder Blumer.
44 *The Symptomatology and Treatment of Traumatic Insanity. A. B. Richardson.
45 *Results of Brain Surgery in Epilepsy and Congenital Mental Defect. William P. Spratling.
46 *Additional Notes on Tent Treatment for the Insane at the Manhattan State Hospital, East. A. B. Wright and C. Floyd Haviland.
47 *A Consideration of the Hereditary Factors in Epilepsy. R. E. Doran.
48 *Prevalence of Insanity in California. John W. Robertson.
49 *The Nature and Genesis of an Insane Delusion. J. W. Wherry.
50 *Examination of the General Cerebrospinal Fluid in General Paralysis. Jost D. Kramer.
51 *Hospital Provision for the Insane Criminal. H. E. Allison.
52 Address on the Death of Dr. A. B. Richardson. H. C. Rutter.

43.—This article appeared elsewhere. See The Journal of July 25, ¶81, p. 284.

44. **Traumatic Insanity.**—Richardson does not recognize any special symptomatology of mental disturbances from trauma, though he describes a certain class of cases that may be the result. Many of the symptoms, however, belong to the neurotic rather than the psychic type, and these are intermingled in nearly all cases. Even in the purely functional neuroses there is the psychic disturbance, the relation of the *ego* to the environment is disturbed, the judgment is at fault, the emotions are deranged and the mental strength somewhat diminished. In the great majority of cases, moreover, there is a complication of a prospective damage suit which in some cases is the principal cause of the disorder, though the patient may be perfectly honest. Settlement of the suit will sometimes entirely remove the trouble without any evidences of intentional malingering.

45. **Brain Surgery in Epilepsy.**—Spratling gives the results of operation in 33 cases of epilepsy. In 21 there was no improvement; in 8 the attacks lessened, but operation was only a part of the treatment and not the most effective in his opinion. In 3 the condition was aggravated. In one a gynecologic operation seemed to produce recovery, the uterus being a retention cyst it was removed with all appendages. The patient has been free from the disease since that time. She had had an operation on the brain for traumatic trouble, to which the epilepsy was attributed, but this did not relieve, as the epilepsy was evidently the result of an autointoxication. In none of the cases was operation itself fatal, which is in contrast to the results in idiocy, where there is considerable mortality. He also reviews the effects of surgery in 111 cases of idiocy. The improvement was comparatively insignificant. He says surgical interference may be still used in isolated cases of idiocy, but it seems clear that it is slowly finding its position in rational surgery along a plane far lower than what at first seemed possible at the time of its inauguration.

46. **Tent Life for the Insane.**—Wright and Haviland report very encouraging results from the care of the insane in tents, aiding not only the tuberculous patients, but as also of use in other forms of insanity. They think it is worthy of application as a therapeutic measure in the modern treatment of insanity.

47. **Hereditary Factors in Epilepsy.**—Doran analyzes a number of cases of epilepsy and calls attention particularly to the following points noted in the study of heredity in the histories of 1,300 epileptic patients in a public institution:

> Though it was impossible to secure data in many cases, yet a definite history of the various neuroses of alcoholism was found in 46.5 per cent. of the total. Alcoholism, epilepsy and insanity combined were responsible for 38.6 per cent. of the total cases, and paternal alcoholism existed in 18 per cent. of all cases. Diseases other than those connected with the nervous system have little hereditary influence in epilepsy. The age of onset is influenced by the character of the heredity.

48. **Insanity in California.**—California is now just a little over fifty years old. In its beginning insanity was almost unknown, but in 1860 the ratio was 1 to 1,000, in 1870 it was 1 to 500, and at present the registered insane number 1 to 260 of the general population. There are a number of reasons given by Robertson for this large ratio: One is the universal state care, bringing out all the cases; another is the large proportion of mental derangement in the foreign-born population, due to change of environment, homesickness, etc. The foreign born do not comprise more than 25 per cent. of the population, but they supply 57 per cent. of the insane, and immigrants from other states also furnish a considerable proportion. Heredity does not figure conspicuously, but the mild climate favoring long hours of working, etc., the briefness or absence of vacations, etc., all have their influence. Education and age seem to have but little necessary effect, but the disproportion of men to women is remarkable. Of the 5,494 patient, 3,448 are men. He speaks particularly of beer drinking as a cause. California beer contains 3 to 5 per cent. alcohol and the drinking of twenty steins, which is not unusual for some, means the absorption of 12 ounces of alcohol. Neither whiskey nor wine, though they may be more stimulating, are so insidiously poisoning. In conclusion he notes the difficulties of ascertaining the correct statistics for comparison as in many other states the number of insane reported is evidently only those acutely insane, those that happen to be under special care, or those who have been committed as deranged.

49. **Insane Delusions.**—Wherry sums up an insane delusion as an idea born in subconscious cerebration; projected into consciousness in times of stress; believed implicity and strenuously defended by the originator, but which no one else will accept as true.

50. Cerebrospinal Fluid in Paresis.—Kramer has studied the composition of the cerebrospinal fluid in 11 cases of paresis, 13 cases of dementia precox and several cases of other forms of insanity, counting the number of leucocytes. He finds that the results agree with those of Joffroy and Mercier in the greater prominence of leucocytosis in paretics. He thinks that the method may be a valuable one in making the differential diagnosis in doubtful cases.

51. The Criminal Insane.—The care of convicts and criminals committed as insane is discussed by Allison, who urges greater vigilance on the part of prison officials to detect insanity, and the erection of special hospitals for the criminal and dangerous insane and the commitment thereto by judicial order of all that belong to that category that they may be kept until fit to be released. Lastly, in all institutions for the care of criminals and defectives there should be greater vigilance in ascertaining the personal history of each inmate with a view to detecting and deporting all aliens who may have entered the country in violation of the immigration laws.

Annals of Surgery, Philadelphia.

August.

53 *Thyroidectomy and Sympathectomy for Exophthalmic Goiter B. Farquhar Curtis.
54 *The Surgical Treatment of Exophthalmic Goiter. John B. Deaver.
55 Bilateral Bony Ankylosis of the Temporomaxillary Articulation of Traumatic Origin and Its Surgical Treatment. W. J. Roe.
56 *The Anatomy of the Inferior Ethmoidal Turbinate Bone, with Particular Reference to Cell Formation; Surgical Importance of Such Ethmoid Cells. Howard A. Lothrop.
57 *The Gradual Surgical Occlusion of Large Arteries: Its Relative Advantages, Together with an Experimental Inquiry as to Its Feasibility. Robert T. Stratton.
58 *The Treatment of the Peritoneum in Diffuse Peritonitis. Joseph A. Blake.
59 *A Proposed Method of Retroduodenal Choledochotomy for the Removal of Impacted Calculi in the Retroduodenal and Papillary Portions of the Common Bile Duct. Albert A. Berg.
60 *A Chemical Hypothesis for the Etiology of Cancer. John Rogers, Jr.
61 *The Method of Infection of Actinomycosis in Man. Fritz Maass.

53.—See abstract in THE JOURNAL, xl, p. 1669.

54. Exophthalmic Goiter.—Deaver concludes as follows from his observations and the study of others' work:

1. That, as surgical treatment is recognized as the most satisfactory in exophthalmic goiter, so is complete bilateral cervical sympathectomy to be considered the operation of choice. 2. The operation should not be performed during the height of psychical irritation or tachycardia, nor by an operator who has not an absolute knowledge of the anatomy of the neck and a large experience in dealing with difficult operative procedures, or the means at hand to cope with any emergency. 3 The results of the operation are far better than the other procedures, the mortality is much lower and, in cured cases, the improvement is permanent. 4. In chronic glaucoma, especially after the failure of iridectomy and sclerotomy, this operation may restore vision completely, unless the disease is too far advanced, with absence of light perception. 5. In recurring attacks of epilepsy, sympathectomy should be resorted to. The results warrant the operation. Jonnesco has reported 12 cures and 4 improvements in 49 epileptics operated on before 1899.

56. The Inferior Ethmoidal Turbinate.—Lothrop's article is largely anatomic, describing and illustrating the conditions in the nose with special reference to cell formation in the inferior ethmoidal or middle turbinate, which may in certain cases produce trouble. The treatment of the condition is surgical.

57. Gradual Occlusion of Large Arteries.—Stratton has experimented on dogs with gradual occlusion of large arteries with special reference to its feasibility as a preliminary to permanent ligation, extirpation of tumors and other operative procedures. While it is impossible to exactly compare the conditions in lower animals with those in man, he thinks the method has its advantages and may be of decided value where closure of the abdominal aorta is concerned, not, however, for permanent ligation, as that would be fatal, but in arteries of lesser caliber, except for special reasons which might determine its use for aneurism. The forcible or weak blood current, together with the presence or absence of arteriosclerosis and the accompanying lack of general tissue-vigor, would determine the desirability of adopting gradual closure or ordinary ligation.

58.—See abstract in THE JOURNAL, xl, p. 1595.

59. Retroduodenal Choledochotomy.—The method proposed by Berg is practically as follows: A small, round, hard cushion should be placed under the lower dorsal region of the patient, throwing the parietes forward. Next, abdominal incision through the right rectus from the costal arch to the umbilicus. Then free exposure of the descending portion of the duodenum, separation of adhesions, division between the two ligatures if vascular. The liver is drawn upward by a broad retractor, the stomach pushed over to the left and the transverse colon downward by gauze compresses and held away by the assistant. Next, mobilization of the descending duodenum: Three or four cm. external to the right border of the duodenum, the posterior parietal peritoneum is incised in a longitudinal direction from the flexure of the duodenum above to the transverse mesocolon below. Then with the finger the internal or left portion of the divided peritoneum is elevated from the parietes up to the right duodenal border; the finger is passed behind the duodenum, gently separating it up to its inner border, from the vertebræ, inferior cava and aorta. It is now only loosely fixed at its flexure above, at the transverse mesocolon below, and along its inner concave margin, and is easily rotated to the left around a longitudinal axis passing through its inner margin. This brings its posterior surface and the retroduodenal and papillary portions of the common duct anteriorly, and affords an excellent exposure. The duodenal branch of the pancreatic duodenal artery lies anterior to the duct about one-fourth of an inch. The accompanying vein lies just behind the duct and sometimes a branch of the vein crosses it. The superior mesenteric branch of the portal vein is considerably internal to the duct and the vena cava posteriorly to it. The duct is readily recognized and can be grasped between the fingers, incised, and impacted calculi removed. The site of incision into the duct should be covered by a narrow wick of gauze and the descending duodenum allowed to fall back to its original position. If drainage of the common bile and hepatic duct is required, the common duct is incised in its free portion in the gastrohepatic ligament, and a drainage tube inserted into this opening. The incision into the retroduodenal portion of the duct can be easily sutured, though this should not be necessary. This operation works well on the cadaver, and he asks those who think well enough of it to try it and report results.

60. Cancer.—Rogers suggests as a theory of the etiology of cancer that it is due to enzymes assimilating from the blood the carbohydrate to form the glycogen necessary for the life and growth of the cells, and by an excess of nutriment causing outgrowth beyond the natural limits in the shape of malignancy. That there is an enzyme in cancerous tissue has been shown by Buxton in a yet unpublished document, though he does not affirm that its amount is in proportion to the malignancy, but this the author suggests as an inference. He applies this theory to the clinical facts and reports experiments which are as yet, however, incomplete.

61. Actinomycosis in Man.—Maass offers the following as facts or disputed points made prominent by the cases of actinomycosis which form the basis of his paper:

1. The diagnosis of "primary pulmonary actinomycosis," even in the absence of all abdominal symptoms, must remain doubtful without a postmortem examination. 2. In abdominal, as well as in pulmonary actinomycosis, the patient should be closely questioned regarding any previous more or less indistinct symptoms of appendicitis and sores at the anus. 3. Fecal concrements found in the appendix in cases of actinomycosis should be microscopically examined. 4. In actinomycosis following typhoid-like symptoms, a Widal test should be made. 5. At the postmortem special attention must be paid to intestinal scars, which may easily avoid detection. 6. Experiments and clinical observation indicate that the fungus can not enter the human or animal body without a wounded surface. 7. Must the wounded body also be the carrier of the inf[illegible] n infection take place secondarily through a [illegible] wound or the chronic ulcers described? 8. [illegible] of the skin or actinomycosis of the jaw in [illegible] offer a suitable object for investigation in regard to point No. 7.

Alienist and Neurologist, St. Louis.

August.

62 *Unrecognized Toxic Insanities. T. D. Crothers.
63 *Outlines of Psychiatry in Clinical Lectures. C. Wernicke.
64 *Consideration of the Medicolegal Aspects of Aphasia. Charles H. Hughes.
65 *Subcutaneous Drainage in the Surgical Treatment of Hydrocephalus Internus. Nicholas Senn.

66 Idiopathic Bilateral Atherosis. V. Krafft-Ebing.
67 *Mixoscopic, Adolescent Survivals in Art, Literature and Pseudo ethics. (To be continued.) James G. Kiernan.

62 (and 172). **Unrecognized Toxic Insanities.**—Crothers holds that toxic insanities, especially from drugs and spirits, are *increasing*. This is evidenced not only by the records of courts and hospitals in the degenerate classes, but also in the higher walks of life where unexpected crimes or aberrant conduct startles society. When these are studied they are found to be dependent largely on alcohol and drug habits. Close study, he says, reveals a distinct origin, progress and development of these degenerative psychoses with progressive brain and nervous disorders. Alcohol is the most prominent of these causes, but it is a probable fact that a large per cent. of all insanities occurring in the more well-to-do classes are directly or indirectly the result of alcohol or drugs, and are largely unrecognized except in the later stages, and then often do not attract attention except by accident. The changes in the conduct, character, habits, etc., in alcohol and drug users can only be explained as true psychoses. He remarks that fully one-fourth of medical practice in this country among the better off is directed to the correction of injuries produced by these habits, though the actual psychologic condition is often unrecognized and unknown. Among the lower classes it is evident that a very large proportion of the crime and insanity is due to this cause.

63. **Acute Hallucinosis.**—In this lecture Wernicke describes a case of hallucinatory paranoia, a type of psychosis, under this name, and which must be differentiated from delirium tremens from the simple acute psychoses of apprehension and from cases of chronic development. In former writings he has called it chronic hallucinosis. The course of the disease is characterized by acute, rapid onset and the descending condition of its curve. Its treatment is only possible in the acute stage at an insane asylum, and under these circumstances the prognosis is favorable, but it is quite frequently only the initial stage of a rapidly progressive sensory psychosis, which, he says, deserves the name of acute progressive hallucinosis.

64. **Aphasia.**—In this lecture Hughes notices the medicolegal bearing of aphasia, taking the view that if a patient is conscious of his crippled condition and attempts to compensate for it, he is capable of making legally valid wills or documents. The severe forms of altered speech utterances due to irritation of the speech centers or their psychologic areas are also alluded to, such as the gibberish of idiocy, but more especially the irritative functional sort of the disorder involving the speech center, such as a tendency to verbal autorhythmic forms of speech repetition. The repetition of a word, tone or phrase is more characteristic of the transitory functional disorders than of organic speech center damage. They are mostly examples of mental aberration with coexistent speech center rhythmic excitation, and we should be guarded and not mistake the counterfeit for the genuine aphasia.

65. **Hydrocephalus Internus.**—Senn reports a case of attempted subcutaneous drainage of an internal hydrocephalus, the object being to avoid infection. The patient died rather unaccountably—no postmortem was allowed—though marked improvement seemed to follow the operation. The case indicates to him, however, that subcutaneous drainage is preferable to open drainage, and proves conclusively that the cerebrospinal fluid is quickly absorbed by the connective tissue elements as soon as it escapes from the ventricle.

67. **Myxoscopic Adolescent Survivals.**—Kiernan, in this installment of his article, notices the cases of Pope, Rousseau and Sacher-Masoch as instances of this type. The histories and comments are interesting and instructive. They illustrate, he thinks, how adolescent storm and stress often dominate mentally long after adolescence, even in those who have apparently passed through the period without nervous breakdown. Many instances of morbid mentality show that the relationships between genius and idiocy are of this kind.

Archives of Otology, New Rochelle, N. Y.

August.

68 *Should the Deaf Be Debarred from Accident Insurance? James A. Spalding.
69 *Tinnitus, with a Plea for Its More Accurate Musical Notation. James A. Spalding.
70 The University Clinic for Diseases of the Ear and Throat in Rostock. O. Koerner.
71 Three Clinical Communications to Otology (Scotoma Auris, Syncope, etc.).

68. **Deafness and Accident Insurance.**—Spalding notices his own case and concludes from his personal experience and study that owing to the greater care the deaf person takes of himself because of his defect, and his better perception of sounds in street noises, than in the case of those who can hear, and also in his better bone conduction by which he readily becomes aware of approaching danger, he is as good a risk against pedestrian accidents as are those who can hear well.

69. **Tinnitus.**—Spalding has studied the musical pitch of tinnitus and suggests the usefulness of testing this. He thinks in some cases it may be of practical value both in the relief of the condition and, if it is true, as Zaufal has suggested, that there is a certain set of auditory cells more easily affected by irritation than others, we can probably in no better way discover what those cells are and where they are situated in the labyrinth than by studying and investigating their location-pitch as exhibited by their tinnitus when they are irritated.

Annals of Ophthalmology, St. Louis.

July.

72 *The Accommodative Asthenopia of Donders. George J. Bull.
73 *Why Not Employ Intra-capsular Irrigation in Cataract Operations? H. O. Reik.
74 A Case of Tuberculosis of the Conjunctiva; Recovery without Local Interference. F. L. Henderson.
75 Papillomata of the Conjunctiva and Cornea. R. H. Johnston.
76 A Clinical Lecture on the Art of Extracting for Cataract. C. Bell Taylor.
77 Report of a Case of Purulent Metastatic Ophthalmia in Meningitis, Giving Rise to Meningitic and Sympathetic Symptoms After Thirteen Years; Enucleation; Recovery. C. Zimmermann and Brown Pusey.

72. **Accommodative Asthenopia.**—Bull argues that the so-called accommodative asthenopia of Donders is more a disorder of function of the motor nerves of the eye than of the accommodation or refraction. He asks whether the name accommodative asthenopia should be maintained, and whether the term muscular asthenopia should not be limited to cases of insufficiency of the internal recti.

73. **Intracapsular Irrigation.**—Riek advocates the use of intracapsular irrigation in cataract operations and finds that he is in accord with McKeown in favoring this method. His conclusions are in substance that the introduction within the eye of sterilized saline solution is harmless, and that the removal of cortex is a mechanical process and regulated by ordinary physical laws, and that from the anatomic structure and conditions irrigation is more efficient in removing cortex than any other method. It also removes blood and bubbles of air. It shows the condition of the capsule, gives tone to and replaces the iris and is effectual in making the toilet of the wound. Free irrigation by the nozzles may be practiced without fear. The irrigation does not tend to cause prolapse of the vitreous, and secondary operations are required in a very small percentage of cases.

Journal of Eye, Ear and Throat Diseases, Baltimore.

July-August.

78 *The Bacteriology of Acute Otitis Media. E. C. Ellett.

78. **The Bacteriology of Acute Otitis Media.**—From a study of cases, including some 40 in private practice, in which bacterial determinations were made, Ellett concludes that all the usual varieties of pyogenic organism are associated, apparently as the cause, with acute otitis media. We can not tell from a bacteriologic study which cases are likely to prove severe and of long duration or mild and brief. A classification of otitis media from a bacteriologic point of view is *possible*, if care is taken, but its value is questionable.

Ophthalmic Record, Chicago.

August.

79 *How Shall We Open the Capsule? A. J. Erwin.
80 Interstitial Keratitis, Complicating Ophthalmia Neonatorum. Alvin A. Hubbell.
81 Complete Absorption of an Injured Crystalline Lens in a Man 46 Years Old. G. F. Keiper.
82 *Concerning the Terms Antimetropia and Anisometropia; Brachymetropia and Hypometropia in Place of Myopia; Hypermetropia and Hyperopia. G. F. Suker.

79. **Capsulotomy.**—Erwin advocates opening of the capsule and describes his method. After dilating the pupil he passes the cataract knife in the corneal margin at the equator. Then advancing on a plane declining 10 degrees from the horizontal he transfixes the capsule, then raises the point of the knife and counter punctures the cornea two or three mm. above the equator, and completes the corneal flap in its clear margin. Unless the capsule is especially brittle the knife will pass up under it to the pupillary margin, cutting a smooth central flap about the size of the ordinary pupil, which will be enlarged by the passage of the lens. This large flap will naturally fall to the lower segment of the capsule, leaving a clear pupil. This operation, he thinks, is so safe and complete and easily done he wonders why it has not been generally adopted. His last one hundred cases thus operated on have not shown a single case of sepsis, iritis or luxation, and only 8 cases have required a secondary operation.

82. **The Correction of Ophthalmic Terms.**—Suker pleads for the more correct use of the terms antimetropia and anisometropia, the former meaning a different kind of refraction and the other an unequal amount or degree of the same kind of refraction in the two eyes, supplanting a less useful term at the present time. He also suggests the use of brachymetropia and hypometropia in place of myopia and of hyperopia as expressing the relative amount of sight of one eye in comparison with the other without any reference to its actual refraction—simply the greater acuity of vision—instead of confusing it with hypermetropia, as is too often the custom. He notices the various definitions of these words and shows the present confusion in their current use. He urges that the term myopia should be discarded, as in its basic sense it signifies merely blinking or winking.

Washington Medical Annals.

July.

83 *Three Cases of Tetanus Successfully Treated. J. Ford Thompson.
84 Report of a Case of Malta Fever in Washington, D. C. W. B. Banister.
85 The Practical Mosquito Work Done at Havana, Cuba, Which Resulted in the Disappearance of Yellow Fever from that Locality. W. C. Gorgas.
86 Cholelithiasis. J. Ford Thompson.
87 Case of Amyloid Liver and Spleen in Ulcerated Pulmonary Tuberculosis. D. S. Lamb.
88 The Normal Age of Man. T. A. R. Keech.
89 Two Cases of Pachymeningitis Hemorrhagica Interna. D. S. Lamb.
90 The Need of a Hospital and Better Facilities in Washington for the Treatment of Nervous Diseases. I. S. Stone.
91 A Case of Excision of the Cecum for Sarcoma in a Woman Who Had Had Symptoms of Appendicitis. I. S. Stone.
92 Case of Endothelial Sarcoma of Urinary Bladder. D. S. Lamb.
93 *Drugs and Their Adulterations and the Laws Relating Thereto. H. W. Wiley.
94 Some Studies in Connection with the Virulence of Tubercle Bacilli. E. A. de Schweinitz.
95 Human and Animal Tuberculosis. D. E. Salmon.
96 Case of Hernia; Gangrenous Intestine; Operation. George T. Vaughan.
97 Case of Cancer of Pylorus; Operation. George T. Vaughan.
98 Case of Intestinal Obstruction. A. A. Snyder.

83. **Tetanus.**—Thompson reports 3 cases, all cured by chloral and bromid treatment, and in 2 supplemented by carbolis acid injections according to the Bacelli method.

93. **Drugs and Their Adulteration.**—Wiley's article is a very interesting, but rather a long one, showing how drug adulteration is often done, its saving of expense and the amount of swindling of the public which is carried on in this way. He mentions especially the substitution of acetanilid, which is worth about 2 cents per ounce, for phenacetin, which is retailed for about $3.20, making a profit something like 160 times the original value; the use of wood alcohol in extracts, etc. He notices the results of state board examinations, and the practice of the courts in regard to the question. He thinks that good national and state laws properly formulated would not require numerous annoying persecutions because the reputable dealer would be likely to readily fall in with the law.

Texas Medical Journal, Austin.

August.

99 *Experiments to Determine the Disinfecting Value of the Morris Formaldehyd Generator. Allen J. Smith.
100 Tenotomy as a Preli[illegible] the Reduction and Cure of Talipes; R[illegible] J. S. Wooten.
101 Suggestions on the [illegible] Lying-in Chamber. W. B. McLaughlin.

99. **Formaldehyd Disinfection.**—Smith's article is an experimental one with the Morris formaldehyd generator. A large proportion is taken up with tabulated statements of experiments. The room used for disinfecting experiments was not large and its absolute closure not possible, but from his trials it would seem that 1,000 c.c. of alcohol thus used are sufficient to effectually destroy the organisms in three hours' time in a room containing 850 cubic feet of air space or when the gas is generated in the proportion of 1.6 per cent. by volume or above. It would probably be best if the charge could be so arranged as to give approximately 2 per cent. per volume in rooms having more apertures. Under the conditions used in these experiments the gas generator is efficient in the destruction of the *Streptococcus pyogenes*, the *Bacillus typhosus*, the *Bact. anthracis*, the *Mycob. diphtheriæ* in from three to six hours of exposure. Its efficacy was evidenced by its distinct destruction of the sporulating anthrax. There are, however, some organisms that are resistant, as shown by the type of the *Bacillus subtilis* producing contamination, but this is not remarkable as special forms of this organism have been found to resist streaming steam for sixteen hours.

The Laryngoscope, St. Louis.

August.

102 *An Unusual Case of Spontaneous, Bilateral Hemorrhage from the Ear. M. A. Goldstein.
103 *Localized Hemorrhage into the Tympanum, with Intact Membrana Tympani. Seymour Oppenheimer.
104 Exploratory Puncture of the Drum Membrane in Certain Diseases of the Middle Ear. Dunbar Roy.
105 A Case of Lipoma of the Tonsil. Clement F. Theisen.
106 *Facial Neuralgia, Six Cases, Due to Diseases in the Nose and Antrum, with Comments. A Case of Immediate Tracheotomy for Foreign Body. W. Peyre-Porcher.
107 Notes on Cases of Sarcoma of the Nose, with Presentation of Pathologic Specimens and Micrographs. J. Price-Brown.
108 A Case of Empyema of the Frontal Sinus with Complications. T. W. Moore.

102. **Bilateral Aural Hemorrhage.**—Goldstein reports a case at length which had been thoroughly studied by other physicians as well as himself. He excludes by the history the charge of malingering, though that diagnosis had been made by leading authorities. He considers it largely a hysterical condition. The source of bleeding he could never absolutely ascertain, though he located it as nearly as possible in the angle formed by the posterior wall of the auditory canal in the plane of the membrana tympani. While he has seen it appear all at once he was not able to locate the bleeding point. The case seemed to be cured by radical suggestive therapy. The patient was anesthetized, the auditory canal dried out and the entire head put in a plaster-of-paris bandage. The patient was kept in the recumbent position and watched for forty-eight hours. A stiff crinoline bandage was then applied for forty-eight hours and renewed daily for one week. At the end of that time the dressings were removed and the patient announced cured and there has been no recurrence. He thinks the case is without a parallel in otologic literature. He reproduces all the other cases of bilateral hemorrhage of the auditory canal that he has found in the literature.

103. **Hemorrhage into the Tympanum.**—Oppenheimer reports cases showing this phenomenon and illustrating the tolerance of the tympanic cavity to large amounts of blood. While trauma is perhaps the most frequent cause, it may follow other diseases, as in the cases reported by Hektoen, Kümmel and others. The symptoms are impairment of hearing and tinnitus. Vertigo is absent as a rule. There may also be a history of otitis media as in the so-called hemorrhagic otitis media described by McBride.

106. *Facial Neuralgia.*—Peyre-Porcher holds that the most frequent cause of severe facial neuralgia is localized inflammation in the nose, antrum or teeth. In the last 6 cases treated by him the chief and only cause of the trouble was found in these organs. In 2 of the cases which he reports there had been removal of the gasserian ganglion without effect, and the nasal conditions had been entirely overlooked.

Therapeutic Gazette, Detroit.

August 15.

109 *The Results of the Treatment of 408 Cases of Typhoid Fever, with a Report of Experiments with a New Method. H. G. McCormick.
110 *Change of Climate in the Treatment of Phthisis. H. S. Bissey.
111 *The Silver Antiseptics. V. Coblentz.
112 Effects of Gases and Powder Smoke on Coal Miners' Eyes, and the Treatment to Be Used. G. R. Gilbert.
113 A Case of Priapism of Spinal Origin. H. D. Stitchter.
114 Instructions to Students Administering Ether. George Morton.
115 Cesarean Section Versus Abortion or Miscarriage in Women with Deformed Pelves. M. H. Bishop.

109. Typhoid Fever.—McCormick reviews his 22 fatal cases and details his treatment in the successful ones. His plan is to keep the bowels open first with calomel and then with saline, licorice powder or other laxative, using also camphor as an arterial stimulant in some cases, with the local application of guaiacol for the reduction of temperature both by topical applications and hypodermically, and in some cases preceding it with a hypodermic injection of 1/100 gr. of nitroglycerin. For hemorrhage he objects to the use of opium and relies on strychnin to support the circulation with hypodermoclysis of saline solution. He prescribes an easily digestible diet of animal broths, buttermilk, etc., not relying on any one thing. A careful examination of the stools is the guide for the diet. For an intestinal antiseptic he employs acid sulphate of soda and gives his results, also detailing extensive experiments on guinea-pigs and *in vitro*. He employed this drug in 4 cases and concludes from his observations:

> That the acid sulphate of soda is germicidal to typhoid bacilli in a solution of 1 to 300. 2. That it does not have a toxic effect when used hypodermically on guinea-pigs in a solution of 1 per cent. 3. That it increases leucocytosis and, in this way, helps nature to combat the disease. 4. That it neutralizes typhotoxin, and must, in a measure, lessen the delirium, fever, diarrhea and mental stupor, and modify various other symptoms attributed to this poison. 5. That it prevents, to a great degree, the congestion of Peyer's patches and the other lymph follicles of the intestines. 6. By so doing it prevents, to some extent, hemorrhage and perforation. 7. That it will resist the bacilli or toxin in any portion of the body. 8. That it will greatly lessen the complications of the disease. 9. That it is a prophylactic, as it can be taken by mouth in large quantities in an antiseptic strength, and as it will not be neutralized in the stomach, although the susceptible typhoid stomach is one of subacidity. 10. That this acid sulphate of soda will replace physiologically the deficient hydrochloric acid. 11. That it furnishes an abortive treatment, since if it lessens the intestinal involvement it would necessarily shorten the disease. 12. It may be used to purify contaminated drinking water by allowing the solution to stand from twelve to fifteen minutes before being taken.

110. Climate in Phthisis.—Bissey's article chiefly treats of the climate of New Mexican resorts, the advantages of which he points out.

111. Silver Antiseptics.—Coblentz describes the various new silver preparations which have been brought forward as obviating the disadvantages of silver nitrate. Argentamine, (ethylene diamine silver nitrate) is less irritating than silver nitrate, though it still has this bad quality to some extent. Tachiol (silver fluorid) and silberol (silver sulphocarbonate) are mentioned as drugs in regard to which the literature is as yet too scanty to afford an opinion. Ichthargan is said to have an astringent as well as an antiseptic action, being a combination of silver nitrate and ichthyol sulphonic acid. Citrate and lactate of silver, which have been used by Credé in surgical practice both in solution and as dusting powders, are discussed. Care should be used in their application as they discolor the clothing. Argonin is a combination of silver, casein and alkali and argonin-L contains twice the strength in silver. Albargin is a combination of gelatose with silver nitrate; largin, a combination of para-nucleo-proteid with silver, containing 11.1 per cent. of the latter, a gray powder soluble in water; nargol, a combination of nucleinic acid and silver; argentol (silver oxychinolin sulphonate); collargol (argentum soluble Credé, or argentum colloidale), protargol and argyrol or silver vitellin. Nearly all of these are unstable preparations and require to be protected from the light. Their principal use has been in gonorrhea and eye troubles. The conclusions which he reaches are that the organic silver preparations represent a real addition to modern material medica. All of them are less irritating than the nitrate of silver, and therefore much better tolerated by the patient. The fact that they are not precipitated by albumin and chlorids enables them to penetrate more deeply into the tissues, and therefore promotes their germicidal activity. The percentage of silver is of much less importance than the special combination in which the silver exists.

Journal of the Michigan State Medical Society, Detroit.

September.

116 The Bougie-catheter. Schuyler C. Graves.
117 Railroad Injury to the Pelvis with Rupture of the Urethra. Ralph H. Spencer.
118 Ectopic Gestation, with Report of Cases. William F. Metcalf.
119 Differential Diagnosis of Typhoid Fever. W. A. Ferguson.
120 The Abuse of Inflation and Massage of the Middle Ear. Emil Amberg.
121 Some Observations on Deranged Metabolism, with Clinical Application. Samuel Bell.

Kansas City Medical Index-Lancet.

August.

122 Surgical Tuberculosis. L. P. McCulston.
123 Prostatic Surgery. Benjamin M. Ricketts.
124 Address, Medical Association of the Indian Territory. Fred S. Clinton.
125 Medical Malingering and Intentional Fraud. John Punton.

Kansas City Medical Record.

August.

126 Dysentery. Edgar A. Dulin.
127 Pelvic Disorders in the Etiology of Neurasthenia. W. M. Reitzel.

Alabama Medical Journal, Birmingham.

August.

128 Transmissibility of Diseases of Animals to Animals of Other Species. George T. McWhorter.
129 Some Symptoms by Which Cardiac Disturbances May Be Detected Clinically, and the Necessity of Careful Diagnosis, Prognoses and Treatment. L. W. Johnston.
130 Hydrotherapy. Carl Fox.
131 Flat Foot. William T. Berry.
132 The Creosote Treatment of Lobar Pneumonia. M. N. Due.
133 Some Remarks Concerning Education and the Results of the Examination of Over Two Thousand Young College Women. D. L. Wilkinson.

Southern California Practitioner, Los Angeles.

August.

134 Nursing from a Legal Point of View. Henry W. O'Melveny.
135 Address to the Graduates of the Agnew Sanitarium, San Diego. Elbert Wing.
136 Crime; Its Prevention and Cure. Walter Lindley.

Pacific Medical Journal, San Francisco.

August.

137 Ovarian Proliferating Cystadenoma. Winslow Anderson.
138 Excision of the Superior Maxillary Under Medullary Narcosis. A. W. Morton.
139 *Remedial Faults in the Editorial Work of Medical Journals. T. D. Crothers.

139.—This article is practically the same as that abstracted in THE JOURNAL of August 1, ¶71, p. 338.

Carolina Medical Journal, Charlotte.

August.

140 Primary Tuberculosis of the Tonsils. Richard H. Johnston.
141 Treatment of Typhoid Fever. L. F. Griffith.

Old Dominion Journal, Richmond, Va.

August.

142 Medical Organization. J. Harris Pierpont.
143 The Use and Abuse of the Nitrites. A. B. Greiner.
144 Pathology and Symptoms of Constipation. Mark W. Peyser.
145 Gelatine Treatment in Aneurism. Ennion G. Williams.
146 The Exaltation of Animal Magnetism. William H. Taylor.

Journal of the Kansas Medical Society, Topeka.

August.

147 Hare Lip and Cleft Palate Complicated with Protrusion of Intermaxillary Bone. P. D. Hughes.
148 The Present Status of Alcoholics. E. Smith.
149 Deaf Mutism. H. E. Williamson.
150 Some Thoughts Concerning Treatment of Syphilis of the Eye. H. L. Alkire.

Vermont Medical Monthly, Burlington.

July 25.

151 Some Observations on Urinary Diagnosis. A. B. Bisbee.
152 Quinsy. William F. Waugh.
153 What Should Be the Requisite for Raising the Quarantine in Diphtheria? G. G. Marshall.

Medical Standard, New York.

August.

154 A Neurological Clinic. Daniel R. Brower.
155 The Responsibilities of the Medical College. Carl S. N. Hallberg.
156 The Uterine Segment of the Ureter. Byron Robinson.
157 Correct Breathing. James M. Brown.
158 The World Is Idea. Herman Gasser.

September.

159 Some Cases of Leg Ulcer. E. A. Fischkin.
160 Ulcers of the Leg. Henry G. Anthony.
161 The Proposed National Bureau of Medicines and Foods. George P. Engelhard.
162 The Antiseptic Treatment of Typhoid Fever. William F. Waugh.
163 The Hydriatic Management of Typhoid Fever. David Paulson.
164 The World Is Idea. (Concluded.) H. Gasser.

New York State Journal of Medicine, New York.

September.

165 Typhoid Fever. Philip M. Neary.
166 One Hundred Days of Typhoid Fever. Frank Kenyon.
167 Otitis Media Purulenta Followed by Mastoiditis as a Sequelæ of Typhoid in the Recent Epidemic of Ithaca. John S. Kirkendall.
168 Hints on the Hygiene and Dietetics of Infancy. H. F. Gilette.
169 A Case of Melancholia Agitans. W. E. Douglas.
170 *The Present Position of Gallstone Surgery. William W. Seymour.
171 Principles Involved in the Repair of Lacerations of the Pelvic Floor. James H. Burtenshaw.
172 *Unrecognized Toxic Insanities. T. D. Crothers.

170.—This article appeared in The Journal, April 18, 1903, p. 1052.

172.—Abstracted under 162 above.

Mississippi Medical Record, Vicksburg.

September.

173 Puerperal Eclampsia; Report of Recent Cases. M. O. Shivers.

Canadian Practitioner and Review, Toronto.

September.

174 Therapeutics of Arteriosclerosis. John L. Davison.
175 The Cardiac Aspect of Arteriosclerosis. T. W. G. McKay.
176 Eye Symptoms in Arteriosclerosis. J. Cameron Connell.
177 Cerebral Aspect of Arteriosclerosis. H. A. McCallum.
178 The Medical Expert as a Witness. W. R. Riddell.
179 The Significance of Albumin in Urine. John A. Amyot.
180 Some Cases of Antepartum Hemorrhage. K. C. McIlwraith.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

The Practitioner, London.

September.

1 *Is the Urban Hospital Treatment of External or Surgical Tuberculosis Justifiable? A. H. Tubby.
2 The Treatment of Gout in Carlsbad. (Continued.) B. London.
3 Amentia. Idiocy; Imbecility; Feeblemindedness. A. F. Tredgold.
4 Some Impressions of the Sanatorium Treatment by a Healthy Patient. P. Horton-Smith.
5 Headache. Guthrie Rankin.
6 *The Treatment of Paraplegia in Tuberculosis of the Spine. J. Jackson Clarke.
7 Recent Work in the Field of Anesthetics. J. Blumfield.
8 A Case, with Comments. A Case of Henoch's Purpura. John Orr.

1. **Surgical Tuberculosis.**—Tubby's article is a plea for the country hospital rather than treatment in city hospitals, on the ground that the air of cities is not good for the patients. He has taken the statistics of four municipal hospitals in London and one country hospital which he has been able to obtain, and finds that out of 218 cases treated in city hospitals only 68, or 31.2 per cent., were cured, while 58.6 per cent. were relieved. Relief is no cure in tuberculosis, and half cures are worse than none. Taking the statistics of one country hospital which he has obtained it does not, he says, have a fair chance, as many of its patients were sent down from London hospitals after treatment had been tried and failed. The operative work has not been specially successful there, and the total number of operations was 3. The results, however, showed 14 cures and 24 relieved out of 42 cases, and, therefore, while the stay in the hospital was much longer than in the city hospitals the proportion of cures was very much greater. The advantages of the country hospitals are the smaller number hospitals the proportion of cures was very much greater. The rural hospital, he thinks, should be devoted to but the one object, being conducted on definite principles. No limit should be made as to age; cases once admitted should stay until they are cured or clearly proven to be incurable and separate establishments should be provided for the latter.

6. **Tuberculosis of the Spine.**—Clarke reviews the recent work on this subject and gives reports of cases, personal and otherwise. From the experience derived he concludes that when paraplegia develops rapidly and involves the sensory as well as the motor functions operative interference is necessary, but in other cases rest in bed with some form of extension should be tried; this failing, a skiagraphic examination should be made and the choice then lies between laminectomy and lateral drainage. Removal of the transverse process alone, when guided by a skiagraph, will be sufficient to open a large abscess. He advises against curetting out the abscess cavity, as the cord may be exposed behind it. When there is a sharp angular deformity in the spine the cord will not be in danger of being bruised during the introduction of the tube, but when the spine is nearly straight the tube should be introduced in a forward direction. The daily injection of a small quantity of carbolic lotion may be made through the tube. The transverse processes on both sides of the spine may be removed in order to obtain thorough drainage. Clarke considers Keeley's operation too dangerous in ordinary hands. Menard's costo-transversectomy involves the risk of injury to the pleura. If the removal of a transverse process does not reveal an abscess, laminectomy may be proceeded with, either immediately or after an interval, and the presence of a lateral opening will produce an easy outlet for further suppuration and probably prevent extension of tubercular infiltration around the spine. He objects to weight extension as confining the patient to bed too closely. If bedsores threaten, a water bed should be used. He thinks that the frame of iron-gas-piping of Bradfrod's, on which canvas is stretched and on which the patient can be carried is better than weight extension. Plaster-of-paris corsets and poroplastic supports are hot and heavy, but for temporary use molded troughs of plaster-of-paris or felt are useful.

Archives Gen. de Medecine, Paris.

Last indexed page 752.

9 (Vol. CXCII, No. 29.) Le pouls veineux périphérique dans l'insuffisance tricuspidienne. P. E. Launois and M. Loeper.
10 (No. 30.) Eosinophilie pleurale. Cyto-diagnostic et cyto-prognostic. F. Barjon and A. Cade.
11 (No. 31.) Synovitis of the Sheath of the Abductor Longus of the Thumb. G. Marion.—La synovite de la gaine du long abductor du pouce.
12 L'excrétion chlorurique et ses rapports avec la marche des pleurésies. Ch. Achard and others.
13 (No. 32.) Insuffisance hépatique par paludisme. Délire maniaque par insuffisance hépatique suite de paludisme. Diabète par anhépatie. J. Carrive.
14 Variations de l'ureogénie sous l'influence de la glycosurie alimentaire provoquée. F. X. Gouraud.

Presse Medicale, Paris.

15 (No. 67.) *Le paludisme en Algérie. H. Gros.
16 *L'arthritisme et ses rapports avec le diabetes. Le diabète albuminoique. E. Fiquet.
17 (No. 68.) *Sur la présence de corps étrangers (substances cristallines et microbes) dans la cellule nerveuse. G. Marinesco.
18 *De la centrifugation employée comme moyen rapide pour apprécier la valeur nutritive du lait (of milk). Fabre.
19 *La voie vagino-périneale dans la cure des fistules recto-vaginales superieures. F. Legueu.

15. **Malaria in Algiers.**—Among the points mentioned by Gros in reviewing his experience are that intense heat seems to affect the mosquito as unfavorably as extreme cold or dry weather. This explains the variations in the number of mosquitoes in different years.

16. **Relations of Arthritism to Diabetes.**—Fiquet argues that the arthritic temperament predisposes to certain diseases, but is not an affection in itself, being merely insufficiency of intracellular oxidations. It manifests itself differently, according to the kind of oxidation which is defective. If oxidation of the carbohydrates is insufficient, then diabetes mellitus appears. The oxidases which normally aid in the combustion of sugar are defective or absent, but those which preside over the combustion of albumin and fats may be present in abnormal amounts to make up for their deficiency. If the defective oxidases are those which aid in combustion of fats, then obesity results, while if the missing oxidases are those which aid in combustion of albumin, then a variety of diabetes ensues for which he proposes the name "albuminoic diabetes." Treatment is similar to that for ordinary diabetes, only the albuminous substances and not the carbohydrates must be omitted from the dietary. Cases of this kind may be detected in the early stages and impending serious disease warded off by a

hydrocarbonate and vegetable diet, iron to favor oxidations, massage and hydrotherapy to promote cellular functions in general and the oxidations in particular, and rest in country surroundings. The diagnosis is based on examination of the urine. Determination of the "coefficient of oxidation," that is, the proportion of the ureic nitrogen to the total nitrogen, is important, but not enough alone for the diagnosis. This is established by determination of the alimentary substances which have escaped the action of the oxidases. The best technic for the purpose is by precipitation of these substances by phosphomolybdic acid, which is as valuable for these cases as Fehling's reaction for diabetes mellitus. He adds to 15 c.c. of urine 10 c.c. of fluid containing in 15 gm. of distilled water, 1 gm. of the acid in crystals, and 25 gm. of an 1.18 per cent. solution of hydrochloric acid. The precipitate can be weighed or merely measured in a graduated test tube.

17. **Foreign Bodies in Nerve Cells.**—Marinesco's article was reviewed on page 690. It is copiously illustrated here.

18. **Centrifugalization as Test of Milk.**—Fabre recommends the practice which has been long in use at his clinic to determine the nutritive value of breast milk. After the child has been nursing for two or three minutes 10 c.c. of the milk are drawn into a graduated tube and three drops of methylene blue are added, which does not stain the cream. It is centrifugalized for five minutes, and the amount of space occupied by the cream determines the nutritive value of the milk. He sometimes proceeds further to test the amount of albumin, lactose, etc. In pathologic conditions the information derived has proved of the greatest value for further care of the infant.

19. **Vagino-Perineal Approach to Recto-Vaginal Fistulas.**—Legueu gives cuts of the various steps of his method of obliterating a fistula in the upper part of the recto-vaginal septum. He detaches and incises the rear wall of the vagina up to and beyond the fistula. He then sutures the rectal wall, and later the vaginal wall separately. The site of the lesion is amply exposed, while the disadvantages of incising the perineum proper are avoided.

Semaine Medicale, Paris.

20 (No. 34.) *La [illegible] variété particulière de sarcomatose [illegible] nerveux. Raymond.
21 La tachycardie [illegible] omayer.

20. **Neurofibro-Sarcomatosis.**—Raymond has observed 2 cases of this affection, both in young subjects with tuberculous parentage. The symptoms developed suddenly without apparent cause, suggesting a brain tumor with its principal localization at the base of the brain. In some cases on record spinal symptoms were also observed, but not in his patients, and yet the spinal cord was the seat of multiple tumors in the case that came to autopsy. The main tumor is usually in the cerebello-protuberantial angle, of fibroplastic nature and adherent to the meninges. The nodules in the peripheral nerves usually escape discovery. Treatment can be only palliative owing to the multiplicity of the nodules. He believes that the condition may be regarded as a mesodermic tumor, a primary lesion of the connective tissue of the nervous system. The elements of ectodermic origin are not involved in the process.

Beitraege zur Klin. Chirurgie (v. Bruns'), Tuebingen.

Last indexed page 640.

22 (Esmarch Festschrift Concluded, XXXVII, No. 3.) Exostose bursata mit freien Gelenkkörpern (with free bodies). O. Riethhus.
23 Die aseptischen Operations-Räume der Zuricher Klinik und ihre Bedeutung für die klinische Unterricht. Krönlein.
24 Ueber ein mit Roentgen-Strahlen erfolgreich behandelten Fall von Carcinoma Mammæ. J. v. Mikulicz.
25 *Embolic Transportation of Projectiles. H. Schloffer.—Ueber embolische Verschleppung von Projektilen nebst Bemerkungen über Schussverletzungen des Herzens und der grossen Gefässe.
26 Procedures for Exposure of Posterior Temporal Bone and Cerebellum, with Reports of Cases. F. Krause.—Zur Freilegung der hinteren Felsenbeinfläche und des Kleinhirns.
27 *Treatment of Fissure and Prolapse of Rectum. V. Czerny.—Behandlung der Fissur und des Vorfalles des mastdarmes.
28 Resektion des 3 Ast des Trigeminus am Foramen ovale. O. Hildebrandt.
29 Extra-abdominal Treatment of Intra-abdominal Rupture of Bladder. Ibid.—Extra-abdominale Versorgung intra-abdominaler Blasenrisse.
30 *Surgical Experiences in Kidney Disease, with the Latest Methods of Investigation. H. Kümmel.—Chirurgische Behandlung Nierenkrankheiten unter Anwendung der neueren Untersuchungsmethoden.

25. **Embolic Transportation of Bullets in Heart or Large Vessels.**—Schloffer reports 2 cases of this kind. In one a bullet entering the heart was swept into the subclavian artery. The symptoms were pains in the arm and ischemic paralysis of the right forearm. In the second case a bullet entered the upper third of the femoral artery and was carried into the posterior tibialis posticus. The bullets were removed by an operation in each case. He has found 10 similar cases in the literature in which the bullet entered the circulatory system and remained at the spot or was swept along a certain distance. Experimental research also has confirmed the possibility of such an occurrence. The patients all died in this series. He has collected 23 cases of bullet wounds of the heart, and only 6 survived more than two months. In all of these the right ventricle had been the seat of the lesion.

27. **Treatment of Fissure and Prolapse of Rectum.**—Czerny describes a case of prolapse treated by operative intervention through a parasacral incision exposing the rectum and taking a lengthwise tuck in it with a row of button sutures. The stitches did not pass into the mucosa and the tuck projected toward the lumen of the intestine. The rectal wall was sutured at the same time with several catgut stitches to the severed fibers of the ligaments. By these procedures the wall of the rectum was made smaller and stiffer and it was suspended, thus completely counteracting the tendency to prolapse. He treats fissure by excision in profound anesthesia, uniting afterward the tip of the wound in the mucosa with the opposite point of the wound in the skin, drawing it out for the purpose by a suture passed through the mucosa at the tip of the incision. The rest of the wound is united with two to four stitches. The fissure is thus radically extirpated and the defect left is lined with sound mucosa. He has found the operation a success in his 6 cases treated in this way.

30. **Surgical Experiences in Kidney Disease with Functional Diagnostic Measures.**—Kümmel reviews his extensive experience at the general hospital at Hamburg, which includes 205 cases, with 228 operations. He states that kidney stones were diagnosed by the Roentgen rays in 18 cases, and in 16 they were found at the operation and in 2 at the necropsy, thus confirming the radioscopy in every instance. He regards silk catheters for the ureters as a great improvement, as they can be boiled freely. He boils them in a saturated solution of ammonium sulphate and keeps them in a dry glass cylinder. The information to be derived from cryoscopy is reviewed. His record includes 95 nephrectomies, with a mortality of 16.8 per cent., and he proclaims that since the new functional diagnostic measures have been introduced it has been reduced to 6.4 per cent. The article fills nearly 200 pages and is profusely illustrated. His total mortality was 31, and 174 of the patients were cured. He removed the kidney in 30 out of 35 cases of tuberculosis of the organ, with nephrotomy in 5, and reports 28 recoveries in this group.

Deutsche Med. Wochenschrift, Berlin and Leipsic.

31 (No. 34.) *Biochemistry of Pregnancy. E. Opitz (Olshausen's clinic, Berlin).—Zur Biochemie der Schwangerschaft.
32 *Alkalinity of Blood. W. Orlowsky.—Zur Frage der Alkalescenz des Blutes.
33 *Case of General Thrush Infection. O. Heubner.—Fall von Soor-Allgemeininfektion. (Commenced in No. 33.)
34 *Treatment of Skin Affections with Roentgen Rays and Concentrated Light. W. Scholtz (Königsberg). (Commenced in No. 33.)
35 Ueber die Verwendung des Adrenalins in der Gynäkologie. H. Cramer.
36 Historical Sketch of Medical Faculty at Münster. G. Sticker. Zur Vorgeschichte der med. Fakultat in Münster i. W.
37 (No. 35.) *Zur antitoxischen Tetanus-Therapie. E. v. Behring.
38 *Congenital Malignant Growths. E. Joseph.—Ueber angeb. bösartige Neubildungen.
39 Hydrops intermittens. Heilung durch Iodoform-Glycerin-Injektion. Wiesinger.
40 *Ueber mechanische Behandlung der Blepharoptosis. G. Abelsdorff.
41 *New Method of Quantitative Determination of Sugar in Urine. E. C. Behrendt (Berlin).—Neue Methode quant. Bestimmung von Zucker im Harn.

42 Alleged Substitutes for Quinin. Mühlens.—Ueber angebliche Ersatzmittel für Chinin bei der Malaria-Behandlung.

31. **Bio-Chemistry of Pregnancy.**—Opitz describes experiments with what he calls a "syncytiolytic serum" derived from rabbits, goats, a heifer and a horse, previously injected with tissue from human placentæ freed from blood. The results of the tests were negative in regard to Veit's assumption in regard to syncytiolysis, but, on the other hand, the serum displayed an antitoxic power against the assumed syncytiotoxins which Opitz assumes to be circulating in the blood in eclampsia and to bear a causal relation to it. As soon as the maternal blood penetrates into the trophoblast, cells from the periphery of the ovum drop off into the maternal blood and are swept into various organs. These deported cells perish sooner or later under the action of cytolysins formed in the blood, and the products of their disintegration have a toxic action as foreign bodies. A substance is then produced to neutralize these toxic substances, an anti-syncytio-toxin. This process can be copied in animals by injection of placental tissue, and their serum then acquires the properties of an anti-syncytiotoxin. Opitz has applied this new serum in the treatment of several cases of eclampsia in Olshausen's service, and the results have encouraged the preparation of the serum on a larger scale, and it will soon be put on the market. He does not give any details of the effects on eclamptic subjects further than that it proved absolutely harmless, reserving the particulars for a later communication.

32. **Alkalinity of Blood.**—Orlowsky examined 63 patients with various affections to study the alkalinity of the blood in different morbid conditions. He found that in health it ranged from 240 to 267 mg. NaOH in 100 c.c. of blood with the litmus test, and that in various diseases the alkalinity is proportional to the number of red corpuscles, declining when there are few reds and increasing with them. Artificially increasing the alkalinity of the blood by internal administration of an alkali or by a tepid alkaline enema, has only transient effect. The action of the latter is more pronounced than that of the former.

33. **Generalized Infection with Thrush.**—Heubner's patient was a child of sixteen months, brought to the clinic with symptoms of a diphtheroid affection, suggesting the presumptive diagnosis of generalized infection with thrush. It was confirmed by the postmortem findings. The child died in less than a month after the first symptoms had been noticed. Injection of animals reproduced the syndrome and the anatomic changes. In both the little patient and the animals there was the same period of incubation, the high septic fever, the extreme acceleration of pulse and severe dyspnea without lung findings, with retention of consciousness and the rapidly fatal course. The lungs were the only organs free from the overgrowth of the fungi. The invasion could be traced from the necrotic tonsils into the lymph capillaries and thence into the general circulation. Without close attention and study of the case it would have been erroneously diagnosed and labeled diphtheria.

34. **Radio-Therapy of Cutaneous Affections.**—Scholtz reports his experience with different combinations of salves, *x*-rays, the iron lamp and the curette in skin affections, lupus in particular. By varying the combination he found it possible to obtain excellent effects.

37. **Antitoxin Treatment of Tetanus.**—Behring affirms that the day, even the hour, the minute, when the antitoxin can be applied, is of the greatest moment. He urges that it should be accessible at all times, as only by this means can a correct judgment as to its efficacy be formulated. A blank circular is given now with each vial, which the physician is requested to fill out with the details of the case and return.

38. **Congenital Malignant Growths.**—Joseph publishes from Czerny's clinic a case of a mixed tumor removed with the left kidney from a weakly child sixteen months old. Several varieties of tissue were found in the tumor which had evidently developed from the Wolffian body, including pure sarcomatous granulations. The infant has grown since into a remarkably healthy child, with no indications of recurrence of the malignant neoplasm. It was peculiarly interesting from the fact that the tumor formed a movable thrombus in the renal vein. It was the size of a fist, and weighed 600 gm. He reports also a second case, an embryonal tumor in the abdominal wall, in malignant degeneration, removed from an infant five months old, with no recurrence to date. The mothers were healthy in both these cases. The fetus can thus become affected with malignant disease, although apparently protected from the causes to which we are inclined to ascribe its etiology, and it can develop without affecting the maternal organism.

40. **Mechanical Treatment of Blepharoptosis.**—Abelsdorff had a spring applied on the inner side of the glasses the patient was in the habit of wearing, starting from the nose-piece. When putting on the glasses the latter lifted the drooping eyelid on the spring and thus mechanically corrected the deformity. No trace of the spring can be seen in the cuts showing the glasses in place.

41. **Quantitative Determination of Sugar in Urine.**—Behrendt points out that the Fehling reaction is unreliable in case of the presence of organic combinations of iron in the urine. He has been seeking to remedy this and describes a technic which is simple and sufficiently accurate. He uses an alkaline solution of bismuth nitrate which differs from Nylander's reagent in that only one-tenth of the amount of the nitrate is used. He weighs out 32.747 gm. of the sediment after dissolving the nitrate in distilled water. Then 500 c.c. of double normal soda solution is poured over it and the precipitate dissolved in 50 gm. Seignette salt (potassium sodium tartrate), and distilled water added to make a liter. He adds 10 c.c. of this fluid to 10 c.c. of the urine in an Esbach tube, and heats in the water-bath for half an hour. It is then set aside for fifteen to twenty minutes. The amount of the precipitate (bismuth oxydul) is the index of the sugar, as 1 c.c. corresponds to 1.4 per cent. sugar.

Mitteilungen a. d. Grenzgebieten, Jena.

Last indexed page 754.

43 (XI, No. 5.) *Ueber Struma mit Knochen-Metastasen (metastasis in bones). K. S. de Graag.
44 *Lymphatics of [illegible] y. K. Sakata.—Ueber die Lymphgef[illegible] l über seine regionären Lymphdrüsen [illegible] der Verbreitung des Carzinoms.
45 *Tu[illegible] lsohn (Frankfurt a. M.).
46 *H[illegible] ids in Head. Wilms (Leipsic). [illegible] Kopfschüssen.
47 *Ue[illegible] H. Quincke (Kell).
48 *Ch[illegible] R. H. Focken (Heidelberg). —Ueber chronische ankylosierende Entzündung der Wirbelsäule.

43. **Struma with Metastasis in Bones.**—De Graag found metastases in the lungs and in the tenth and eleventh thoracic vertebræ in case of an adeno-carcinoma in the thyroid gland. The metastases, however, under the microscope resembled more the structure of the original thyroid gland than the structure of the neoplasm.

44. **Lymphatics of Esophagus Region.**—Injection of the cadavers of children by Gerota's method showed that the lymphatics of this region originate in two separate sets, with no direct communication between them. The first set is arranged lengthwise in the lower layer of the mucosa, while the second is not so large nor so regular, and forms a network on the surface of the perimysium. The lymphatics communicate directly with those of the pharynx above and those of the stomach below, although the intervening vessels may run a long way in the submucous tissue or against the wall before reaching them. The close clustering of glands around the recurrent nerve explains the paralysis of this nerve frequently observed in cases of carcinoma of the esophagus. He noted it in 18 out of 236 cases, and in 13 it was unilateral. The glands may, therefore, be grouped as the near and the distant. The latter are represented by the deep, lower cervical glands, found in the angle formed by the subclavian and internal jugular veins.

45. **Tuberculosis of Hernial Sac.**—About 58 cases of this condition have been published and Lewisohn has observed 4 more.

tected in the ureter on this side, while it existed in the other ureter. He refers to recent experiences which suggest that the variations in the freezing-point are not absolute indices of the morbid conditions as some believe. The freezing-point remained the same before and after an uremic crisis in a case of glomerular nephritis consecutive to scarlet fever. The findings are liable to be influenced by ingestion of water, by change of diet and by the capacity of the tissues for absorption and retention. He has been conducting research along different lines, and believes that valuable information may be obtained by studying the spontaneous urine at different periods during the twenty-four hours, recording the frequency of micturition and the quantity of the urine, with its specific gravity at various hours, showing the relations between the secretion of water and of the solid elements dissolved in it. By the two curves thus obtained an insight into the actual work done by the kidneys is afforded. It can be expressed by the formula: Work equals the specific gravity multiplied by the number of cubic centimeters to the hour. The two lines representing the elimination of water and of solid materials parallel each other in health, and diverge or cross in parenchymatous nephritis. In the interstitial there is more or less irregularity, but the tendency is more towards a parallel. These graphic tracings may reveal disease, still latent, that escapes other tests.

72. **Experimental Administration of Antituberculosis Serum by the Stomach Route.**—Figari reports experiences with desiccated specific serum administered to guinea-pigs and to one patient in the clinic. The results established beyond question, he thinks, that it is possible to obtain effective curative results with specific serum treatment by the mouth the same as by subcutaneous injection. The serum of the animals acquired marked agglutinating property, and in the patient it rose from 1/10 to 1/50. His results corroborate those obtained by Roncagliolo with tuberculosis antitoxin administered by the mouth in his clinic.

73. **Lime as a Hemostatic.**—Silvestri's tests on dogs confirm the fact that lime has a coagulating effect on the blood and may prove effective in arresting hemorrhage. He administered it by the mouth to a patient with a tendency to hemophilia and found that after taking fractional doses of calcium hypophosphite for seven days the blood which at first did not coagulate for twelve hours, clotted abundantly in less than nine. He took at first 7 and then 4 gm. a day.

Bolletino d. Ostetricia e Ginecologia, Florence.

Last indexed XXXIX, page 811.

74 (II, No. 1.) 3 casi di eclampsia puerperale curati col veratrum viride. Pinzani.
75 Urine in Pregnancy. Boni.—Alcune ricerche chimiche sopra le orine delle gravide.
77 (No. 2.) *Endometri [illegible] in puerperio. Cova.
78 Pneumonia During [illegible]—Polmonite in gravidanza. Proprietà [illegible] diplococco del sangue materno e fetale.
79 3 casi di endometrite emorragica curati colla corrente galvanica. Gelli.
80 Idrocefalo ectromele con schistoprosopia e pede varo. Roster.
81 (No. 3.) Trattamento sotto-peritoneale del peduncolo nell' ovariotomia. Sfameni.
82 Frontal Presentation in Twin Pregnancy. Guicciardi.—Gravidanza gemellare. Anomalia del III e IV tempo.
83 *Physiologic Action of Veratrum Viride. Chidichimo.—Azione fisol. del veratro verde.

77. **Puerperal Tuberculosis of the Endometrium.**—Cova describes the clinical history and postmortem findings of a case of tuberculous endometritis, the first symptoms of which appeared in the form of diarrhea during the pregnancy. It was evidently aggravated by the puerperium and proved rapidly fatal. He has observed a second case of tuberculous endometritis, which was likewise rapidly fatal after delivery. Veit and Franqué have also reported cases of accelerated progress of genital tuberculosis after childbirth. Davidson and Merletti have published instances of miliary tuberculosis in the puerperium. Cova thinks that there are no mechanical reasons which can explain this increased gravity of tuberculous lesions in the peritoneal or genital regions such as explain the acceleration of tuberculous lesions in the lungs by the process of pregnancy and parturition. He suggests as a possible explanation for the extraordinary malignancy of tuberculous infection during the puerperium that the tubercle bacilli may find in the pregnant woman a particularly favorable soil for their development. Roster mentioned in the discussion that followed, a case of puerperal tuberculous infection of the peritoneum which took the form of periuterine exudates, followed by symptoms of pulmonary tuberculosis, although the patient survived for some time.

74 and 83. **Action of Veratrum Viride in Health and in Eclampsia.**—Chidichimo's researches on dogs and other laboratory animals indicate that veratrum viride has a marked depressant action in physiologic conditions. It rapidly reduced the temperature, and this reduction continued for hours, while about thirty hours were required before the drug was eliminated from the organism in case of rabbits and dogs. The facts observed indicate also that it acts mainly as a toxin on the muscles. On the whole his experience would impel him to proclaim that veratrum viride should be banished from the treatment of puerperal eclampsia if it were not for the possibility that the organism in the stress of eclampsia may react differently to the drug than might be expected from its physiologic action on animals. Pinzani reports in No. 1 three cases of puerperal eclampsia treated with this drug. He made 2 subcutaneous injections of 1 c.c. of the Italian fluid extract of veratrum viride, with a half-hour interval, after forceps extraction of a dead fetus. The same amount was given in a single dose to the second patient. The fetus was extracted later with forceps, as it was seen to be succumbing. The same amount was injected in the third case, but with a longer interval. Improvement was marked in all after the injections, as also in 6 other cases treated in the same way and previously reported. The women all recovered but the fetus did not survive. In one case he gave it by the mouth. The total amounts ranged from 1 to 4 c.c., never more than 3 c.c. in one dose. Saline infusion or enemata were the only other measures used. The pulse is the guide; as this becomes less rapid, under the influence of the veratrum, the convulsions subside.

Medizinskoe Obozryenie, Moscow.

Last indexed page 586.

84 (XXX, No. 1.) *Cyclic Psychoses. P. B. Ganushkin and S. A. Sukhanoff.
85 *Psychosis After Burn. N. Toporkoff.—Psychose poslye ozhoga.
86 *Hepatoptosis. N. Saveljeff.
87 Obstinate Leg Ulcer Cured by Injections of Calomel. G. Meshtcherski.
88 (No. 2.) *Ob actinomykoz legkikh (of lungs). I. K. Spizharny.
89 *Ob anginye Vincent'a i eya oslozhneniyakh (and its complications). A. Ivanoff.
90 *Gastrointestinal Surgery. L. Varnik.—K kazuistikye zhelodotchno-kishetchnoe chirurgii.
91 *K patologitcheskoe anatomii leukemitcheskago Retinita. K. K. Orloff.
92 (No. 3.) *Multiple Sclerosis. P. P. Tutyshkin.—K symptomatologii mnozhestvennago skleroza.

84. **Cyclic Psychoses and Mania.**—This communication and the previous one in No. 19, treating of mania, both issue from the Moscow clinic for mental diseases. The writers urge the importance of distinguishing between a cyclic course in mania, melancholia and amentia and the true cyclic psychoses. The former may terminate in recovery, and this has led to the belief that the true cyclic psychosis is curable. They observed 86 cases of the latter, including 34 men. It formed 1.94 per cent. of all the mental diseases, but men afforded only one-third of the contingent. In two-thirds of all the cases the affection commenced between 16 and 25, as was also noted with mania, and it was usually ushered in with a phase of depression. Hereditary influences were noted in 87.5 per cent. of all the cases of mania, which numbered .56 of 2,840 male patients and 1.51 per cent. of 1,594 women. Heredity was also a factor in the cyclic psychoses in nearly the same proportion. Melancholia was much more common, especially in women, in whom it occurred seven times oftener than mania.

85. **Psychosis After a Burn.**—Toporkoff's patient recovering from childbirth developed an acute amentia with hallucinations after a burn of the third degree. As the general health improved the mental affection vanished.

86. **Displacement of Liver.**—Savelyeff describes in detail the clinical picture and methods of treating hepatoptosis.

88. Actinomycosis of Lungs.—Spisharny's 3 cases all terminated fatally, notwithstanding vigorous potassium iodid treatment and evacuation of the abscess in the wall of the thorax. The focal process deeper in the lung was not operated on as no communication could be found between it and the abscess. He is convinced that the focal process sometimes spreads by actual metastasis.

89. Complications of Vincent's Angina.—Ivanoff has observed 2 cases and reviews 9 on record to call attention to the complications liable to be encountered. There may be a polymorphous erythem and pains in the joints; occasionally, albuminuria, abscesses and even appendicitis have been observed. In his personal cases he discovered streptococci in the throat associated with Vincent's bacilli, and he ascribes the complications to their participation. He mentions that they are most liable to occur after stomatitis and glossitis.

90. Surgery of Digestive Tract.—Warnek's communication describes an extensive operation on the cecum, and in another case resection of part of the stomach, 9 by 15.5 cm., on account of a carcinomatous scirrhus at the pylorus. Both patients were in good health at time of writing, several months later.

91. Leukemic Retinitis.—Orloff gives cuts of his histologic findings to sustain his assertion that the tumor-like formations observed in the retina in the course of leukemia are merely accumulations of leucocytes at points where the walls of blood vessels have been destroyed. They occur only along the route of the vessels.

92. Symptomatology of Multiple Sclerosis.—Tutyshkin describes a case which he was able to diagnose correctly before the classical symptoms of nystagmus, tremor or disturbance in speech had developed. The progress of the affection confirmed his dictum. He based his diagnosis on the absence of the abdominal and cremaster reflexes and the discovery of the Babinsky sign on the right side only. The paralytic and spastic symptoms were also most pronounced on the right side. Among the early symptoms were periodical attacks of vertigo lasting several days, but then completely subsiding. He also noticed briefly transient attacks suggesting apoplexy: congestion with transient disturbance in speech and weakness in the right hand.

Russkii Vratch, St. Petersburg.

Last indexed page 758.

93 (II, No. 6) *Resection of Nerves in Ablation of Tumors in Neck. S. P. Fedoro[illegible] [illegible] nlya krupnykh nervnykh stvolov pr[illegible]
94 *Embolism of Aorta as [illegible] S. F. Orlowski.—K Casuistik [illegible] pha. Emboliya aorty.
95 Necessity for Chair of Hygiene and of Professional Hygiene in Particular in the Technical Colleges. D. P. Nikolsky.—O predodavanii hygieny, etc.
96 (No. 7.) *Technic for Repeated Cesarean Section. V. N. Orloff.—K technikye proizvodstva povtornago kesarskova syetcheniya.
97 *Endogenic Infection as Origin for Eye Affections. J. V. Zelenkovsky.—Endogennoe zarazhenie, kak pritchina bolyeznei glaza.
98 *Action of Adrenalin on Living Organism. P. P. Byelaventz.—O dyestvie adrenalina na zhevotnii organizm.
99 *Differentiation and Treatment of Aneurism of Abdominal Aorta. M. Y. Gurevitch.—O raspoznavanii i lyetchenii aneurizmi brushnoi aorty.
100 Clinical Experiences with Colloid Silver. A. I. Dvoretzky.—Dalnyeishiya nabliudeniya, etc., rastvorimago serebra.
101 The Dark Side of Sterilization of Milk. N. P. Danilow.—Otritzatelniya storony sterilizatzie moloka v dyelye iskustvennago vskarmlivaniya dyetei.

93. Resection of Nerves in Ablation of Tumors in Neck.—Fedorow had occasion to resect the nerves in the neck in 4 cases of sarcoma which had grown around the nerves. He describes the cases in detail, the results showing that no disturbances followed resection of the spinal accessory nor of the nerves of the cervical plexus and short branches of the brachial plexus. Complete anesthesia of the skin of the side of the neck followed after the roots of the cervical plexus had been severed. His experience demonstrates that even extensive tumors in the neck can be successfully operated on, but those requiring resection of the vagus are most dangerous, especially when the common carotid and the jugular vein have to be resected also. Severe secondary symptoms may also follow resection of the long nerves of the brachial plexus, but, on the whole, his results are encouraging. All his patients recovered.

94. Embolism of Aorta in Typhoid.—Orlowski states that thrombosis of the abdominal aorta in the course of an infectious fever has been reported only 36 times, and he was able to find only 2 that corresponded to the case he describes. The patient was a young man, and on the fifteenth day symptoms developed suggesting myocarditis. The necropsy showed that thrombosis evidently followed, in the left ventricle, with embolism in the descending aorta.

96. Repeated Cesarean Section.—Orloff emphasizes that when a second operation of this kind is found to be necessary the prognosis is much better than for the first. The conditions are known and the patient is more tranquil. He describes a case in which a woman was thus delivered of a healthy child twice, with an interval of fifteen years. In operating, the probability of encountering adhesions must be borne in mind and the incision not made in the same place as the first. A "fundal" incision may prove advisable for these cases.

97. Endogenic Origin of Eye Affections.—Zelenkovsky publishes an account of experimental studies which indicate that the eye is liable to participate when there is infection elsewhere. The effects reach the eyes through the circulation and the anterior chamber is most liable to be affected. The posterior segment of the eye affords better conditions for microbes and consequently when they gain access to this part of the eye the resulting affection is more serious. Irritation of any kind and traumatism facilitate the entrance and lodgement of germs in the eye. On the other hand, he asserts that endogenic infection is not a factor in sympathetic ophthalmia.

98. Action of Adrenalin on Animal Organism.—Byelaventz has been experimenting with adrenalin on animals and noted that the rise in the blood pressure was due partly to spastic contraction of the vessels from stimulation of their walls and partly to stimulation of the heart action. It has at first a stimulating and then a paralyzing action on the centers of the vagus. When the pulse becomes accelerated the drug should be suspended. In small doses it promotes the gaseous interchanges, but in larger doses reduces them and with them the temperature. Death in intoxication from adrenalin is due to paralysis of the respiration center. The functional activity of the central nervous system is diminished by the drug. In conclusion he warns that he found it inconstant in its action and consequently urges great caution in administering it by the intravenous or subcutaneous routes.

99. Differentiation and Treatment of Aneurism of Abdominal Aorta.—Gurevitch remarks that the aneurism is almost invariably to be found on a level with the superior mesenteric artery. He has found that better results followed hygienic-dietetic measures than others. Subcutaneous injection of gelatin and internal administration of sodium iodid did not display much efficacy in his experience. The iodid is useful, however, when syphilis may be assumed. He reports three cases.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

The American Illustrated Medical Dictionary. For Practitioners and Students. A Complete Dictionary of the Terms Used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry and the Kindred Branches, Including Much Collateral Information of an Encyclopedic Character, Together with New and Elaborate Tables of Arteries, Muscles, Nerves, Veins, etc.; of Bacilli, Bacteria, Micrococci, Streptococci; Eponymic Tables of Diseases, Operations, Signs and Symptoms, Stains, Tests, Methods of Treatment, etc., etc. By W. A. Newman Dorland, A.M., M.D., Editor of the "American Pocket Medical Dictionary." Flexible Leather. Pp. 798. Price, $4.50 net; with Thumb Index, $5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., *Professor of Therapeutics* and Materia Medica in the Jefferson Medical College of Philadelphia. Assisted by H. R. M. Landis, M.D., Assistant Physician to the Out-patient Medical Department of the Jefferson Medical College Hospital. Volume III. September, 1903. *Diseases of the Thorax* and Its Viscera, Including the Heart, Lungs and Blood Vessels; Dermatology and Syphilis; Diseases of the Nervous System;

Obstetrics. Cloth. Pp. 398. Price, $2.50. Philadelphia and New York: Lea Brothers & Co. 1903.

AMERICAN TEXT-BOOK OF SURGERY. For Practitioners and Students. Edited by William W. Keen, M.D., LL.D., F.R.C.S. (Hon.), Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia; and J. William White, M.D., John Rhea Barton Professor of Surgery, University of Pennsylvania, Philadelphia. Fourth Edition, Thoroughly Revised and Greatly Enlarged. Handsome Octavo of 1363 Pages, with 551 Text Illustrations and 39 Full-page Plates, Many in Colors. Cloth. Pp. 1363. Price, $7.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

AMERICAN POCKET MEDICAL DICTIONARY. Edited by W. A. Newman Dorland, A.M., M.D., Assistant Obstetrician to the Hospital of the University of Pennsylvania. Containing the Pronunciation and Definition of all the Principal Terms Used in Medicine and Kindred Sciences, Along with Over 60 Extensive Tables. Fourth Edition, Revised and Enlarged. Flexible Leather. Pp. 566. Price, $1.00. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

A TEXT-BOOK OF OPERATIVE SURGERY. Covering the Surgical Anatomy and Operative Technic Involved in the Operations of General Surgery. Written for Students and Practitioners. By Warren Stone Bickham, Phar.M., M.D., Assistant Instructor in Operative Surgery, College of Physicians and Surgeons, New York. With 559 Illustrations, Entirely Original. Cloth. Pp. 984. Price, $6.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

CLINICAL EXAMINATION OF THE URINE AND URINARY DIAGNOSIS. A Clinical Guide for the Use of Practitioners and Students of Medicine and Surgery. By J. Bergen Ogden, M.D., Formerly Instructor in Chemistry, Harvard University Medical School, Boston. Second Revised Edition. Illustrated, Including 11 Plates; 9 of Them in Colors. Cloth. Pp. 418. Price, $3.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

NERVOUS AND MENTAL DISEASES. By Archibald Church, M.D., Professor of Nervous and Mental Diseases and Head of Neurological Department, Northwestern University Medical School; and Frederick Peterson, M.D., President New York State Commissioner in Lunacy. Fourth Edition, Thoroughly Revised and Enlarged. With 338 Illustrations. Cloth. Pp. 922. Price, $5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

LESSONS IN DISINFECTION AND STERILIZATION. An Elementary Course of Bacteriology, Together with a Scheme of Practical Experiments Illustrating the Subject-matter. By F. W. Andrewes, M.A., M.D. Oxon., F.R.C.P. Lond., D.P.H. Cantab., Lecturer on Pathology, Pathologist and Sanitary Officer to St. Bartholomew's Hospital, London. Cloth. Pp. 222. Price, $1.05. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co. 1903.

A COMPEND OF HUMAN ANATOMY. By Samuel O. L. Potter, M.A., M.D., M.R.C.P. Lond., Formerly Professor of the Principles and Practice of Medicine in the Cooper Medical College of San Francisco. Seventh Edition, Revised and Enlarged. With 138 Wood Engravings; also Numerous Tables and 16 Plates of the Arteries and Nerves. Cloth. Pp. 372. Price, 80 cents net. Philadelphia: P. Blakiston's Son & Co. 1903.

CHEMISTRY, INORGANIC AND ORGANIC, WITH EXPERIMENTS. By Charles Loudon Bloxam. Ninth Edition, Rewritten and Revised. By John Millar Thomson, LL.D., F.R.S., Professor of Chemistry, King's College, London; and Arthur G. Bloxam, F.I.C., Consulting Chemist and Chartered Patent Agent. Cloth. Pp. 871. Price, $6.00 net. Philadelphia: P. Blakiston's Son & Co. 1903.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Sixth Edition, Thoroughly Revised. Fully Illustrated. Cloth. Pp. 1,300. Price, $5.50 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

A TEXT-BOOK UPON THE PATHOGENIC BACTERIA. For Students of Medicine and Physicians. By Joseph McFarland, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. Fully Illustrated; a Number in Colors. Cloth. Pp. 629. Price, $3.50 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

A TEXT-BOOK OF OBSTETRICS. By J. Clarence Webster, M.D. Edin., F.R.C.P.E., F.R.S.E., Professor of Obstetrics and Gynecology, Rush Medical College, in Affiliation with the University of Chicago. With 383 Illustrations; 23 in Colors. Cloth. Pp. 761. Price, $5.00. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

A HANDBOOK OF THE DISEASES OF THE EYE AND THEIR TREATMENT. By Henry R. Swanzy, A.M., M.B., F.R.C.S.I., Surgeon to the Royal Victoria Eye and Ear Hospital. Eighth Edition. With 168 Illustrations and Zephyr Card of Holmgren's Tests. Cloth. Pp. 580. Price, $2.50 net. Philadelphia: P. Blakiston's Son & Co. 1903.

A COMPEND OF THE DISEASES OF THE SKIN. By Jay F. Schamberg, A.B., M.D., Professor of Diseases of the Skin, Philadelphia Polyclinic and College for Graduates in Medicine. Third Edition, Revised and Enlarged. With 100 Illustrations. Cloth. Pp. 291. Price, 80 cents net. Philadelphia: P. Blakiston's Son & Co. 1903.

A TEXT-BOOK OF PATHOLOGY. By Alfred Stengel, M.D., Professor of Clinical Medicine in the University of Pennsylvania. With 394 Text Illustrations, many in Colors, and 7 Full-page Colored Plates. Cloth. Pp. 933. Price, $5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

SERUM THERAPY, BACTERIAL THERAPEUTICS AND VACCINES. R. T. Hewlett, M.D., M.R.C.P., D.P.H. Lond., Professor of General Pathology and Bacteriology, King's College, London. Cloth. Pp. 262. Price, $1.75 net. Philadelphia: P. Blakiston's Son & Co. 1903.

A TEXT-BOOK OF OBSTETRICS. By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania. With 46 Illustrations; 39 of Them in Colors. Cloth. Pp. 900. Price, 5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. [illegible]03.

A TEXT-BOOK OF DISEASES OF WOMEN. By Thomas A. Ashby, M.D., Professor of Diseases of Women in the University of Maryland. With 233 Illustrations. Cloth. Pp. 661. Price, $4.50. Baltimore: Williams & Wilkins Co. 1903.

HOMOPHONIC CONVERSATIONS IN ENGLISH, GERMAN, FRENCH AND ITALIAN, Being a Natural Aid to the Memory in Learning Those Languages. By. C. B. and C. V. Waite. Cloth. Pp. 137. Price, $1.00. Chicago: C. V. Waite & Co.

TRANSACTIONS OF THE WEST VIRGINIA STATE MEDICAL ASSOCIATION. Charleston, May 26, 27 and 28, 1903. Instituted April 10, 1867. Paper. Pp. 144. Wheeling: West Virginia Printing Company. 1903.

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TRANSACTIONS OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS. Vol. XV. For the Year 1902. Cloth. Pp. 381. New York: Press of Stettiner Bros. 1903.

TRANSACTIONS OF THE IOWA STATE MEDICAL SOCIETY. Volume XXI. Fifty-second Annual Session, 1903. Cloth. Pp. 472. Council Bluffs, Iowa: New Nonpareil Company. 1903.

UNIVERSITY OF PENNSYLVANIA. Contributions from the William Pepper Laboratory of Clinical Medicine (Reprints). No. III. Paper. Philadelphia. 1903.

The Public Service.

Navy Changes.

Changes in the Medical Corps of the U. S. Navy for the week ending Sept. 5, 1903:

Asst.-Surgeon R. A. Bachmann, detached from the naval station, Cavite, P. I., and ordered to naval station, Guam, L. I.

Surgeon M. F. Gates, detached from the *Atlanta* and ordered to the Naval Hospital, Philadelphia, September 21.

Surgeon W. B. Grove, detached from the Naval Hospital, Philadelphia, and ordered to the *Atlanta*.

Asst.-Surgeon J. A. Murphy, detached from the *Celtic* and ordered home to wait orders.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Sept. 12, 1903:

SMALLPOX—UNITED STATES.

California: Los Angeles, Aug. 22-29, 2 cases.

Illinois: Chicago, Aug. 30-Sept. 5, 2 cases.

Massachusetts: Fall River, Aug. 30-Sept. 5, 6 cases.

Ohio: Cincinnati, Aug. 29-Sept. 4, 2 cases; Dayton, Aug. 30-Sept. 5, 1 case; Toledo, Aug. 30-Sept. 5, 1 case.

Pennsylvania: Pittsburg, Aug. 8-15, 46 cases, 15 deaths.

South Carolina: Charleston, Aug. 30-Sept. 5, 1 case.

SMALLPOX—FOREIGN.

Belgium: Antwerp, Aug. 8-22, 3 deaths.

Brazil: Rio de Janeiro, July 26-Aug. 9, 22 deaths.

British Guiana: Demerara, July 4-18, 3 deaths.

Canada: Vancouver, Aug. 1-31, 1 case.

Colombia: Barranquilla, Aug. 16-23, 3 deaths; Bocas del Toro, Aug. 18-25, 1 case.

Great Britain: Dundee, Aug. 15-22, 1 case; Leeds, Aug. 8-29, 24 cases; Liverpool, Aug. 15-22, 10 cases; London, Aug. 15-22, 13 cases; Newcastle-on-Tyne, Aug. 15-22, 5 cases, 1 death; South Shields, Aug. 15-22, 2 cases; West Hartlepool, Aug. 15-22, 1 case.

India: Bombay, Aug. 4-11, 8 deaths; Calcutta, Aug. 1-8, 1 death.

Italy: Catania, Aug. 20-27, 1 death.

Mexico: Vera Cruz, Aug. 22-29, 2 cases.

Russia: Moscow, Aug. 8-15, 1 death; Odessa, Aug. 15-22, 3 cases; St. Petersburg, Aug. 8-15, 3 cases.

Straits Settlements: Singapore, July 11-18, 1 death.

Turkey: Constantinople, Aug. 16-23, 1 death; Smyrna, July 19-Aug. 9, 60 deaths.

Venezuela: Maturin, Aug. 17, present.

YELLOW FEVER.

Brazil: Rio de Janeiro, July 25-Aug. 9, 5 deaths.

Colombia: Bocas del Toro, Aug. 24-31, 2 cases, 1 death.

Costa Rica: Limon, Aug. 20-27, 2 cases, 1 death.

Mexico: Citas, Aug. 23-30, 45 cases, 7 deaths; Coatzacoalcos, Aug. 22-29, 1 case, 1 death; Merida, Aug. 16-29, 21 deaths; Progreso, Aug. 16-22, 2 cases, 1 death; Tampico, Aug. 16-29, 30 cases, 26 deaths; Tehuantepec, Aug. 16-29, 8 deaths; Salina Cruz, Aug. 16-29, 10 cases, 6 deaths; Vera Cruz, Aug. 22-29, 61 cases, 15 deaths.

CHOLERA—FOREIGN.

China: Amoy, July 18-Aug. 1, 650 deaths.

India: Bombay, Aug. 4-11, 3 deaths; Calcutta, Aug. 1-8, 9 cases.

Peru: Pacasmayo, Aug. 13, present.

Straits Settlements: Singapore, July 4-11, 15 deaths.

PLAGUE—INSULAR.

Philippine Islands: Cebu, Sept. 3, present.

PLAGUE—FOREIGN.

Bolivia: La Paz, Aug. 13, present.

Brazil: Rio de Janeiro, July 25-Aug. 9, 8 deaths.

China: Amoy, July 18-Aug. 1, 100 deaths; Hongkong, July 18-25, 13 cases, 11 deaths.

India: Bombay, Aug. 4-11, 56 deaths; Calcutta, Aug. 1-8, 9 deaths.

Peru: Arequipa, Aug. 13, present; Molendo, Aug. 13, present.

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Original Articles.

THE BACTERIA CONCERNED IN THE PRODUCTION OF EYE INFLAMMATIONS.*

ROBERT L. RANDOLPH, M.D.
BALTIMORE.

I do not think we are called on to discuss the so-called eye bacteria from a historical point of view, for that would mean a consideration of nearly all these bacteria in their causal relationship to the diseases with which they were first identified. As a matter of fact, we have not found any bacteria which are pathogenic only for the eye, though the possibility of there being such bacteria is suggested when we think of sympathetic ophthalmia and trachoma, two diseases which appear to be peculiar to the human race, and one of which, in all probability, is due to a specific bacterium.

Before speaking of the bacteria which we usually regard as pathogenic for the human eye, I may be pardoned for introducing matter which to many of you may seem very elementary, but which may help to a better understanding of what follows. Bacteria may be divided into two classes, the saprophytes, or those which obtain their nutrition from dead organic material, and the parasites, or those which live at the expense of some other living organic creature. The activities of the saprophytes lead to decomposition, putrefaction and fermentation, while the activities of the parasites result in disease and death. The saprophytes resolve dead animal and vegetable bodies into simpler compounds, carbonic acid, water and ammonia, which serve as food for vegetation, and for this reason this group of bacteria may be regarded as benefactors, while the parasites exist at the expense of some living organic creature, or to put it stronger, at the expense of sight and life. It is to the second class, the parasites, that the group of eye bacteria belongs. In this group we will find two of the grand divisions of bacteria in general micrococci or cocci and bacilli, these names being given them according to their individual outline, the cocci being round or sphere-shaped, the bacilli being rod-shaped. The third grand division of bacteria, the spirilla, finds no representatives in the group of so-called eye bacteria.

In the group of micrococci we find the *Streptococcus pyogenes*, the *Staphylococcus aureus* and *albus*, the pneumococcus and gonococcus. In the group bacilli, we have Weeks' bacillus, the diplobacillus of Morax-Axenfeld, the diptheria bacillus, xerosis bacillus, tubercle bacillus, *Bacillus pyocyaneus* and colon bacillus. Several of these bacteria are often found in the normal conjunctival sac, and the *Micrococcus epidermidis albus* may be regarded as an almost constant inhabitant of this location, and to a somewhat less extent this is the case with the xerosis bacillus. These two bacteria, then, can not be regarded as actually pathogenic for the human conjunctiva, but I have included them in the group of eye bacteria because they are so closely associated with the life history of the eye, and as I have observed elsewhere, both these organisms under certain conditions can become pathogenic and cause inflammation. Very recently I have had occasion to make repeated cultures from the conjunctival sac of an individual with intense monocular conjunctivitis, which, clinically speaking, was indistinguishable from "pink eye," and I was never able to get anything in either culture or cover-slip but the xerosis bacillus. What rendered this micro-organism pathogenic in this particular case I am unable to say. More than once I have been forced to the conclusion that the *Micrococcus epidermidis albus*, which I have found so often in the normal conjunctival sac, was apparently the cause of an intense conjunctivitis which I was treating. The colon bacillus is another organism which is not generally considered pathogenic, but there is sufficient evidence to warrant the belief that it does become very pathogenic under certain circumstances, so that its presence in diseased conditions while possibly accidental, not infrequently means its direct causal relationship to the disease. A number of cases of catarrhal conjunctivitis have been reported where the colon bacillus was found in the conjunctiva in pure culture, and several years ago I reported a case of panophthalmitis in which I obtained this organism from the vitreous in pure culture. These three organisms, then, are the least pathogenic of the group. When we pass to the other members of this family or group the element of pathogenicity comes out stronger, being most marked in the diphtheria bacillus, then in the gonococcus, Weeks' bacillus, pneumococcus, diplobacillus of Morax-Axenfeld, tubercle bacillus, streptococcus and *Staphylococcus aureus*. The latter organism, as it is found so frequently associated with a normal condition of the conjunctiva and lids, may almost be classed with the three organisms which I have indicated as being relatively less pathogenic. The streptococcus is another organism which is most inconstant in its effects. At times it will seem to have little, if any, virulence, no matter how tested, while again, it exhibits very marked pathogenic properties. When found as the active factor in an ophthalmia we usually have a very intense reaction, as seen in the streptococcus diphtheria of the conjunctiva, also in Parinaud's conjunctivitis. Of course, my grading these bacteria as regards their pathogenic value is an entirely arbitrary arrangement, but judging from the effects produced by their toxins, the arrangement seems to me a reasonable one. All these organisms, however, irrespective of their pathogenicity, require to some extent a helping hand to render them capable of doing harm. While it is impossible to demonstrate always the exact nature of this co-operative agency, it is almost certain in a great number of cases that it consists in an abrasion or injury of the epithelium. Whatever lowers local resistance favors the multiplication of any bacteria which might happen to be in the conjunctival sac, and in overwhelming numbers ordinarily harmless bacteria can become dangerous. The more pathogenic an organism the greater would be the odds against the eye in case of mechanical injury, and I am convinced that the freedom of the eye from suppuration after penetrating wounds from accidents as well as from operations, while due in larger measure to the natural resistance of the eye to the disease, is also to no little extent due to the feeble pathogenic properties of those bacteria which are so often found in the conjunctival sac. No matter how pathogenic the bacteria if they fail to multiply it means that the battle is not to them. The sooner we realize, in dealing with the normal conjunctiva, that the latter is adequately equipped for adversity, the better will be the results of our operative work, and I look forward to no distant day when antiseptic irrigations of the normal conjunctiva in cataract operations will have been generally abandoned, and I am sure that during the past few years there has been a steady growth in the realization of the principle, clean hands, clean instruments, clean cocain, and leave the rest to the tissues of the eye. These rather practical thoughts suggest themselves to me in speaking of the bacteria which are found in the normal conjunctiva. Sometimes I am almost tempted to think that the bacteria which are so often found in this location perform certain important functions in the life of the normal conjunctiva, and that it is not intended we should disturb this relationship. We know that efforts to bring about intestinal and vaginal antisepsis have been followed by worse than failure, and that in the case of one enterprising obstetrician a large crop of puerperal fevers resulted. It is the same story here, bacteria ordinarily harmless are rendered harmful because our mental attitude toward bacteria in general is hostile, but I am convinced that with increasing knowledge we will be compelled to take up another position, even perhaps to regard some of the bacteria which are found in our bodies as benefactors, as blessings in disguise.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, being Part I (accompanied with lantern slide demonstration) of a symposium on the Bacteriology of the Eye by a committee consisting of Robert L. Randolph (chairman), Brown Pusey and Edgar Thomson Approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

BACTERIA IN THE EYE,

AND NOTES ON SOME RECENT WORK IN OPHTHALMOLOGIC BACTERIOLOGY.*

BROWN PUSEY, M.D.
Instructor in Pathology of the Eye in the University of Chicago;
Assistant in Ophthalmology in Rush Medical College.
CHICAGO.

Such an appropriate opening of a subject as that which is forced on me is seldom given to a man. The natural manner in which to consider my subject is to begin with the bacteria that may infect the human conjunctiva, and of these the bacillus of acute, contagious conjunctivitis must first have attention. In the writings of a celebrated German ophthalmologist we find the sentence: "For the principal work in the investigation of this microörganism and the real demonstration of it as the cause of a particular form of conjunctivitis, we are indebted to him who in 1886 described the first cases, in which he was able to prove this microörganism to be the cause of this disease." I have the pleasure of showing a specimen containing the organisms spoken of in the above sentence, which bear the name of the investigator referred to—Weeks, the chairman of our Section. My quotation is from the writings of a gentleman who was to have been the guest of this Section—Professor Uhthoff.[1]

The specimen is a smear from a conjunctival discharge. This statement reminds me of the fact that in studying bacteria in the conjunctival tissue we are greatly handicapped, because many of the organisms that cause conjunctivitis in man do not lend themselves to experimentation in the conjunctivæ of animals. Such is the case with the bacillus of Weeks, the Morax-Axenfeld diplobacillus, the diphtheria bacillus and the gonococcus. It is a curious and interesting fact that the last-named organism has never been found as a parasite in other animals. These organisms will not grow in the conjunctiva of animals, and, as we can hardly excise human conjunctiva for the purpose of such a demonstration, I can not show them in tissue.

In passing, I may refer to the fact that Weeks[2] and Morax[3] have examined tissue containing the small bacillus, and of the severe forms of conjunctivitis Randolph[4] has obtained such tissue from rabbits by injecting diphtheria toxin.

Taking up the chronic forms of conjunctivitis, I am fortunate in the possession of a specimen of leprosy of the conjunctiva, stained to show the lepra bacilli.

Of the chronic forms of conjunctivitis, none is so important as trachoma, and it would be most appropriate if I could at this point show the microörganism of this disease. You will all join me in my regret that such a demonstration is still impossible.

Before leaving the subject of the conjunctiva, I wish to refer to the very important recent work of the chairman of our committee—Dr. Randolph.[4] He has investigated the rôle of the bacterial toxins in inflammations of the eye, and has demonstrated for the first time that, in general, these toxins are incapable of absorption from the intact conjunctival surface, hence such toxins instilled into the healthy conjunctival sac do not produce inflammation; but if they are injected into the conjunctiva or anterior chamber, they invariably set up local inflammation. His conclusions are most interesting, and his experiments, as he says, are in harmony with clinical experience, in that a lesion of continuity is shown to be important, not only in opening a path for invasion by bacteria, but in permitting the entrance of toxins, which constitute the weapons by which the bacterial cells do injury. In this important work Randolph records a study of the bacteriology of the normal conjunctiva of the rabbit, based on an examination of forty-seven cases. The value of this latter will be appreciated when it is recalled that practically all the experimental work of the ophthalmologist is done on the rabbit's eye, and heretofore no work had been done on the bacteriology of the eye of this animal.

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* Read, with stereopticon illustration, at the Fifty-fourth Annual sion of the American Medical Association, in the Section on thalmology, and approved for publication by the Executive mittee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

[1] Uhthoff, W.: Ueber die neuren Fortschritte der Bakteriologie auf dem Gebiete der Conjunctivitis und der Keratitis des Menschen Sammlung zwangloser Abhandlungen aus dem Gebiete der Augenheilkunde, ii, 5, p. 17, 1898.

[2] Weeks, J. E.: The Bacillus of Acute Conjunctival Catarrh or "Pink-eye," Knapp's Arch., xv, p., 441, 1886.

[3] Morax, V.: Recherches bacteriologiques sur l'etiologie der Conjunctivites aigues, etc., Thèse de Paris, 1894.

[4] Randolph, R. L.: The Rôle of the Toxins in Inflammations of the Eye, Amer. Jour. Med. Sci., November, 1902; also, Bulletin Johns Hopkins Hosp., March-April, 1903.

Passing from the conjunctiva to the eyelids, I would call attention to the work of Hala[5] in demonstrating microörganisms in chalazion. In this work he verifies the findings of Professor Deyl, and it is of such interest that I venture to quote from his conclusions:

"Chalazion is an infectious bacterial process. The bacilli in incipient chalazion are in all their characteristics identical with that group of bacteria which are designated as xerosis bacilli. The so-called xerosis bacilli which exist in the normal and particularly in the different pathologic conditions in the conjunctival sac, get into the conjunctival tissue by rubbing of the irritated eyes, and cause an acute inflammatory process, which terminates in a chronic swelling filled with granulation tissue. The different catarrhal conjunctival affections, and the asthenopias, are predisposing factors. Contrary to the view of Baumgarten concerning the absolute avirulence of the so-called *Bacillus xerosis*, we have the experimental production of the chalazion process in the eyelids of rabbits by these bacilli, which are derived not only from human chalazion, but also from other pathologic processes. The chalazion is not a retention cyst, and it presents no signs of and has no relation to tuberculosis."

The histologic findings in chalazion make one a little uncertain in accepting unhesitatingly the last statement. The findings of Hala increase our interest in the *Bacillus xerosis* and make the article of Denny,[6] on its morphology and th[illegible] kindred forms (*B. diphtheriæ* and [illegible], of more importance to us.

While on the subject of the eyelids, I may call attention to a suggestive paper by Dr. P. Friedenberg.[7] Starting with the fact that the hair follicles, crypts and glands of the lid margin may, even in apparently healthy lids, retain sebaceous matter, fatty detritus and a varied flora of bacteria, he demonstrates the importance of expression of the lid margins as a therapeutic measure in blepharitis and its complications.

Further important, recent work is that of Römer,[8] Mayer[9] and Hiroto[10] on the subject of the conjunctival sac as a route of general infection. General infection, which has been produced in numerous animal experiments by the introduction of organisms, e. g., pneumococci, into the conjunctival sac, may well give rise to interesting speculation. Hiroto, agreeing with Römer, concludes that in cases of infection by this route, the bacteria enter the circulation not directly from the conjunctiva, but from the mucosa of the nose, to which they are carried by the tears.

Of the serious eye affections, corneal ulcer is in the first class. Of corneal ulcers none is worse than the serpent ulcer. It has been given to Professor Uhthoff[11] [12] and his colleague, Professor Axenfeld, to demonstrate that the serpent ulcer is due to infection with the pneumococcus. The great importance of this work will be appreciated when we think of the possibilities in the treatment of these awful ulcers with antipneumococcic serum.

The next slide shows pneumococci on the edge of the cornea; this section is from an eye enucleated because of an epithelioma, and evidently has been obtained in the beginning of the infection with the diplococcus. The next slide shows these organisms in an eye that went to pieces from a serpent ulcer, and the following section shows the tissue stained with hematoxylin-eosin, and some of the results of the action of the organisms. For the sections from the serpent ulcer, I wish to acknowledge my indebtedness to Dr. E. A. Shumway. We are familiar with the histologic findings in such an ulcer of the cornea, but I wish to emphasize the extension of these organisms in colonies between the corneal lamellæ and the character of the leucocytes in the anterior chamber — polymorphonuclear leucocytes. The next section, for which I am also indebted to Dr. Shumway, shows staphylococci in the cornea.

Hematoxylin usually is not a satisfactory stain for bacteria. This is due to the fact that in ordinary infected tissue there are many nuclei of fixed as well as mobile cells, that take this stain and interfere with the recognition of organisms. I would call attention to the fact that the scarcity of nuclei and the absence of blood vessels in the cornea and, consequently, the slower emigration of leucocytes, allow this stain to show bacteria unusually well in the corneal spaces.

The next section shows gonococci in the cornea. For this section I am indebted to Dr. Gertrude French[13] of Portland, Ore. She got the material from the private practice of Dr. Gruening of New York. For evident reasons, such material is very rare.

Before leaving the subject of ulcer of the cornea, I would allude to the fact that our branch of the science of medicine is abreast of the times in the field of serum therapy. The use of diphtheria antitoxin in diphtheritic conjunctivitis is ancient history, and I believe it is appropriate here to register the ophthalmologist's debt of gratitude to von Behring. Recent work in the subject of serum therapy applies to that miserable ulcer of the cornea—the serpent ulcer. This work has been done by Römer,[14] and in his last communication he reports results that give us reason to expect that by the use of this serum this ulcer will lose its terror.

While dealing with this region of the eye, I may direct attention to a recent and interesting suggestion of Mr. Collins[15] as to a reason why wounds of the ciliary region are especially apt to be followed by sympathetic ophthalmia. He calls attention to the facts, that perforation of the globe in the region of the choroid is not apt to be followed by prolapse—the uvea tends to retreat from the sides of the wound; in wounds of the cornea, the iris may prolapse, but it is not left with a vascular membrane over it; while in the ciliary region, a wound is apt to result in a prolapse, and such a prolapse will be covered with a vascular membrane—the conjunctiva—which is very prone to inflammation. "The possibility of subconjunctival entanglements of the iris or ciliary body forming the track along which inflammation (bacteria), likely to excite sympathetic disease, may enter an eye any time after the receipt of an injury, may be one reason why wounds of the ciliary region are specially liable to be followed by this complication."

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[5] Hala: Zeitschrift für Augenheilkunde, 1901, 6.

[6] Denny, F. P.: Observations on the Morphology of *B. diphtheriæ*, *B. pseudo-diphtheriæ* and *B. xerosis*, Jour. of Med. Research, 1903, ix, 2, p. 117.

[7] Friedenberg, P.: Expression of the Lid Margin as a Therapeutic Measure in Blepharitis and Its Complications, N. Y. Med. Jour., March 7, 1903, p. 413.

[8] Römer, P.: Experimentelle Untersuchungen über Infectionen vom Conjunctivalsacke aus., Zeitsch. f. Hyg., 1899, xxxii, p. 295.

[9] Mayer, G.: Zur Kenntniss der Infection vom Conjunctivalsacke aus., Münch. Med. Woch., 1900, No. 34, p. 1169.

[10] Hiroto, K.: Ueber die Infection vom unverletzten Bindehautsacke aus., Centralbl. f. Bact., 1902, xxxi, p. 225.

[11] Uhthoff u. Axenfeld: Beiträge zur pathol., Anatomie und Bacteriologie der eitrigen Keratitis des Menschen, v. Graefe's Arch., xiii, 1, p. 1, 130.

[12] Uhthoff u. Axenfeld: Weitere Beiträge zur pathol., Anatomie und Bakteriologie der eitrigen Keratitis des Menschen, v. Graefe's Arch., xliv, 1, p. 172.

[13] French, C. G.: Description of an Eyeball Lost from Gonorrheal Ophthalmia, N. Y. Eye and Ear Infirmary Reports, January, 1897, p. 62.

[14] Römer, P.: Weitere Untersuchungen zur Serumtherapie des Ulcers corneæ serpens, Bericht der Ophth. Gesell., Heidelberg, 1902, p. 2.

[15] Collins, E. T.: The Erasmus Wilson Lectures on the Anatomy and Pathology of the Eye, Lancet, Feb. 24, 1900, p. 523.

The next specimen, for which I am also indebted to Dr. Shumway, is one which shows streptococci in the lens. This resulted from a penetrating wound.

The next shows the tubercle bacillus in an eye with tubercular iridocyclitis, which Dr. Hotz enucleated, and which I have recently examined. My experience in staining fully twenty-five sections of this material before I found one single bacillus illustrates one of the difficulties in this kind of work. The section of this material stained with hematoxylin-eosin explains the scarcity of bacilli in it, for it shows vigorous granulation tissue and an abundance of phagocytes. In such tissue tubercle bacilli are always hard to find. I would call particular attention to the character of the cellular infiltration in this process—large mononuclear leucocytes—in contrast to the cells which were shown in the anterior chamber of the eye that was destroyed by the serpent ulcer—polymorphonuclear leucocytes; and after seeing these two specimens, it is interesting to recall the views of Metchnikoff on phagocytosis—the large mononuclear leucocytes, as befits their slower and more unwieldy character, have a preference for animal cells and for bacteria of chronic disease, e. g., for tubercle and leprosy, while the polymorphonuclear leucocytes show a preference for the microörganisms causing acute disease. I would point out the fact that the anterior chamber, being practically a large lymph space with more or less fixed walls, has long been a particularly good region in which to study some of the general pathologic processes.

The next slide shows tubercle bacilli from a case of miliary tuberculosis of the choroid, and the next is a section from this case stained with hematoxylin-eosin, showing several foci of infiltration. I may say here that there is a great temptation in some of these specimens to point out interesting histologic features. I have resisted this so far as possible because of the time limit.

The next two sections illustrate difficulties that may be encountered in a search for bacteria in iridocyclitis or panophthalmitis. The section is from an eye sent to me for study by Dr. C. Zimmermann of Milwaukee, who enucleated it because of an acute inflammatory condition. It will be seen to have all the features of a bacterial process. In a search for bacteria, I stained and studied many sections. With Weigert's modification of Gram's method I found areas like the one illustrated by the next slide. I may say that more than one excellent bacteriologist, on examining this section, pronounced this a probable colony of bacteria. Without any question, these are not bacteria, but are granules of cells, probably mast cells. It will be recalled that mast cells are uncommonly abundant in the eye in inflammatory conditions, and it will be seen that, on account of the staining reaction of the granules of these cells, they here easily may mislead one. As was said, a thorough examination failed to demonstrate bacteria in this eye, although they must have been the cause of the acute process. *This points* to another possible difficulty in demonstrating bacteria in panophthalmitis, i. e., the bacteria may very quickly disappear. That microörganisms may quickly disappear has been experimentally demonstrated lately by Silberschmidt.[16] Working with a form of the hay bacillus, which caused panophthalmitis when injected into the eye of a rabbit, he discovered that on the third or fourth day after the infection the organisms could not be found in smears, and cultures remained sterile. In the case of the eye that I have just spoken of, it was removed four days after the general practitioner noticed that it was inflamed.

THE ESSENTIALS AND NON-ESSENTIALS OF OPHTHALMIC ASEPSIS.*

HAROLD GIFFORD, M.D.
OMAHA.

There are two fundamental propositions which should be kept in mind in our attempt to do aseptic eye surgery. First, that the conjunctival sac in the great majority of cases, and probably always, contains germs which are pathogenic, or which can, under certain conditions, become so. The white pus coccus is probably as constant an inhabitant of the conjunctival surface as it is of the skin. The pneumococcus of Fraenkel is frequently found there and probably occurs more often than most experimenters would have us think. I judge this to be the case from the difficulty with which it is grown and the ease with which its colonies are overlooked, when other germs are plentiful. The germ which occurs in the largest numbers in the conjunctival sac is the so-called xerosis or pseudo-diphtheria bacillus; and, although it is generally described as non-pathogenic, some of the best authorities regard it as a variety of the true diphtheria germ, and believe that, under proper conditions, it may become virulent. I have found it as the sole inhabitant of small abscesses in the lids, and Hala,[1] who has made the most careful study of the subject, believes it to be the common cause of chalazia. Kastalskaja[2] has found it in two cases of panophthalmitis, and it has recently been reported by Warnecke[3] as a cause of purulent otitis media.

The second premise to keep in mind is that to rid the conjunctival sac of these germs is a practical impossibility. This fact has been asserted often enough, but many operators still seem to dote on the idea that by rinsing out the sac with sublimate 1 to 5,000, or some other equally harmless mixture, they can obtain an aseptic operative field. In the latest work of that master of ophthalmology, Panas,[4] this notion evidently prevails, for he says: "The removal of the microbes and other impurities is not complete unless the lids are widely opened by the lid holder and the fluid, in the shape of a stream, is forced under them," etc. If there are any present who believe in the efficacy of such measures they need only make a few cultures from the retrotarsal folds of eyes that they have thus prepared for operation, to be convinced of their error. Furthermore, the germs can not be rubbed out without injuring the tissues; and even if a small portion of the conjunctiva be everted and isolated by means of a Desmarres clamp, the area thus brought into plain view can be thoroughly wiped with moist swabs and treated with various antiseptics, and still, after waiting a minute or two, a scraping from it will show the presence of germs. The lashes also are a favorite abiding place for pathogenic bacteria. The main body of the lashes can apparently be freed from germs by thorough scrubbing with fat-dissolving agents, but none of these has any marked influence on the germs gathered about the roots of the lashes. I have tried all the most highly recommended methods and have found invariably that if, after the attempted sterilization, the lashes are pulled out instead of being cut off, a growth of germs, generally the white pus cocci, will be obtained from the roots. The method of Von Pflugk,[5] which consists in scrubbing the lashes with swabs dipped in benzine, is no exception to this statement. In the trials which I have given this method there has generally been no growth of germs from the shafts of the lashes; but from the roots germs have grown, as in all my previous experiments. I have said nothing about the tear passages because, while we recognize them as a constant possible source of infection, they could be cut off by one means of obliteration or another, if, by doing so, we should be certain of an aseptic field.

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[16] Silberschmidt, W.: Zur Aetiologie der Panophthalmie nach Hackensplitterverletzungen, Bericht der Ophth. Gesell., Heidelberg, 1902, p. 222.

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

[1] Zeitsch. f. Augenheilk., November, 1901.

[2] Abst. in Arch. f. Augenheilk., 36, 3, p. 165.

[3] Abst. in Centralblatt f. Bacteriologie, 30, 18, p. 710.

[4] Am. Jour. Ophthal., March, 1903, p. 74.

Starting with these premises, it is evident, I think, that a certain share of the precautions which general surgeons are apt to consider necessary, can, for the ophthalmic surgeon, be regarded as unessential or even to a certain extent detrimental. To begin with the bath: many operators in describing their technic refer with evident pride to their insistence on every patient taking a full bath. Now, while for esthetic reasons this may be eminently desirable, it seems to me that for an eye surgeon to have his patients take a full bath with any idea that he will on that account get better results from his operations, is on a par with the logic of the medicine man who beats a tom-tom to drive out the spirit of disease. Furthermore, the rigid enforcement of such a rule may occasionally lead to serious trouble. I have in mind an old Irish woman who, so far as I could learn, had never taken a full bath in her life, but who had, nevertheless, lived very happily and in perfect health to the age of eighty. On being sent to the hospital, the head nurse, as a matter of routine, had her stripped and put into the tub, and this unusual experience so excited the old lady that her mind became unbalanced and she was so unruly during her stay in the hospital that it was only through the purest good luck that she did not lose her eye. With regard to the preparation of the skin of the eye lids, it is obvious that the vigorous measures frequently employed in surgery to rid the skin of germs can not be used to advantage here, and unless the operation actually involves the skin, it is questionable whether the latter really needs any special attention, although there can be no objection to any such cleansing as can be done without irritating the eye. Where the skin of the lids is involved, besides scrubbing it carefully with sterile swabs, I think it advisable to paint the skin with 4 per cent. silver, allowing the latter to dry on. I have adopted this plan because I have found that by touching sutures with this solution once a day they can frequently be left in for a week or more without causing any suppuration, even if no bandage is applied. For cleansing the lashes, the benzine method of Von Pflugk is perhaps better than any other, but since it may be that some of the apparent efficacy of this method is due, not to the germs being killed or even removed by it, but to the remnant of some non-volatile impurity of the benzine being left on the lashes, I believe the safest plan in all operations on the globe is to cut off the lashes and, after scrubbing the roots with benzine swabs, to anoint them with an oxid of zinc or some other stable ointment, so as to hold in the germs which are invariably left on them. It may be asked why not pull out the lashes as recommended by Schiötz. My objections to this are that it is decidedly painful, and that it generally causes a marked reaction due, in my estimation, to the increased activity of the germs which must inevitably be left behind in the lash sockets.

The lid margin can apparently be temporarily sterilized by wiping it carefully with sterile swabs, though in doing this care should be taken to wipe away from the palpebral fissure and not to go over the same ground more than once with the same swab. All of these preparations, however, with the exception of cutting off the lashes, are probably non-essential for reasons which will be made evident when discussing the form of bandage.

The preparation of the normal conjunctiva, for an operation on the globe, should be conspicuous for its simplicity or even absence. Realizing that no plan has been discovered which will rid the sac of its germs, we naturally conclude that nothing must be done which will injure the conjunctival epithelium or excite any unavoidable irritation. All irritative antiseptics are worse than useless, and while I formerly wiped out the sac with a moist absorbent cotton toothpick-swab immediately before important operations, I found so many patients in whom even this simple procedure could not be carried out thoroughly without a certain amount of violence that I have abandoned it in all cases where the conjunctiva is entirely normal, limiting my interference with the conjunctiva to wiping it carefully at the point at which I intend to enter the knife; with the addition of an occasional irrigation of the field during and after the operation. As an irrigating fluid, a freshly made and freshly sterilized normal salt solution is probably the least objectionable, but in practice I generally use a boracic acid solution, since the salt solution, if kept in stock, is more apt to permit a growth of fungi which, though easily killed, might nevertheless render the solution somewhat irritating and unstable, while the boracic acid solution, if kept in a vessel with a layer of undissolved crystals at the bottom, is practically free from such growths.

Anything in the way of a preparatory bandage is to be abjured. Numerous experiments have shown that these always increase the number of germs in the normal sac. With regard to the tear passages, if there is any obstruction in the duct or inflammation of the sac, preliminary treatment should, of course, be instituted if there is a reasonable chance of restoring normal conditions in a short time; otherwise, as a preparation for a cataract extraction, it is probably better to extirpate the sac or close up the tear points with the galvanocautery; though I must confess that I have never attempted the latter procedure and have doubts as to whether the cautery will close the points as readily as some seem to imagine. In the case of patients who can be seen several days before a cataract extraction, I believe it is a good routine to slit the upper tear points slightly and inject some indifferent solution in order to be sure of the patency of the duct and the freedom of the sac from even minute quantities of pus; but where the patient must be operated on within twenty-four hours or so, if the conjunctiva seems perfectly normal and there are none of the ordinary signs of obstruction of the duct or inflammation of the tear sac, this precaution may be omitted, since it is almost impossible to dilate either punctum without abrading the membrane; and any such abrasion, until entirely healed over, may furnish the breeding place which will convert a tolerably innocent germ into a pathogenic one. The practice of putting on a bandage twenty-four hours before an operation in order to test the condition of the conjunctiva and tear passages is, as I have previously suggested, decidedly objectionable. With regard to the bandage, there are, I think, very few who believe in using absolutely no protection for the eye after a serious operation. If our patients were all rational both when awake and when asleep this plan might be worthy of consideration, but as it is, I believe it to be a waste of time to discuss it. Whether to leave the eyelids entirely free under some sort of a shield is a more open question. It seems to me that it is decidedly easier for a patient to keep his eye still if a gentle uniform pressure is exercised on the lids, and the quieter the eye is kept for the first twenty-four hours and perhaps longer, the smaller the chance of secondary infection. I am aware of the claim that the action of the lids helps to rid the conjunctival sac of germs, and as previously mentioned, it is certain that in an eye not operated on the number of germs in the sac is increased by bandaging; but these considerations are more than outweighed, in my mind, by the rest which the binocular bandage secures to the operated eye; and as a matter of practical experience I have gained the impression that where an eye operated on is left open under a shield there is more apt to be an increase of secretion and irritation than where some sort of covering for the lids is used. The experiments of Genth[6] indicate, as one might *a priori* conclude, that the sterilization of the bandage materials is a matter of little moment. Genth made numerous operations on the rabbit's eye and applied bandages of cotton infected in the grossest way with pathogenic germs; and, in spite of this, obtained an infection in only six out of sixty-four cases. All of the infections occurred in a series of fifty operations in which the cotton placed next the eye was completely saturated with a fresh bouillon culture of virulent germs, while in fourteen other experiments in which the bandage cotton was infected in a number of places by wiping off the germs from a spatula dipped in the cultures, no infection took place. When we consider the exaggerated way in which these bandages were infected the conclusion is natural that under ordinary conditions the danger of infection from the average unsterilized cotton is so slight as to be hardly worth considering.

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[5] Arch. f. Augenheilk., 45, 3.

Not knowing just what process was adopted in the preparation of our best absorbent cotton and gauze bandages, I had several samples from standard manufacturers examined in the laboratory of the University of Nebraska in the hope that they might be found sterile. Portions of fresh packages of cotton and of gauze bandages were taken from the outside roll, from the inner rolls and from the ends, but with two exceptions germs growing on agar were found in all the experiments. The germs were not numerous nor were they of well-recognized pathogenic varieties, probably all belonged to the common atmospheric bacteria, but to allow for the possibility of some pathogenic germs being present, I have since then, as before, placed next the eye after all serious operations a layer of cotton which has been freshly boiled for ten minutes in a boracic acid solution. These experiments of Genth also indicate the slight importance of attempting to cleanse the lashes and the outside of the lids, although, on account of the real danger of touching the lashes with instruments, I believe, as previously stated, in cutting off the lashes.

There has never seemed to me to be any sense in sterilizing the roller bandage which is applied outside the cotton.

In deciding whether the cotton which comes next the eye should be moist or dry I have been influenced by the fact that the secretions from the conjunctiva never stick to moist cotton, while if there is any discharge under a dry cotton dressing it is always found stuck both to the lids and to the cotton. This convinces me that where there is any discharge containing mucus or pus, a moist dressing, or a dressing with some stable ointment, can alone be relied on to furnish good drainage. But if wet cotton is used it must, of course, be covered with rubber tissue or something similar to keep it moist. These, however, are matters of minor importance in comparison with the question of how best to apply the dressing so as to secure its prime object, namely, the protection of the eye from external violence and from infection by the patient's fingers. The best protection from external violence can only be secured by using one of the various shield dressings which provide an arch of some firm material, whether it be pasteboard, celluloid, gutta-percha, or metal; and to secure safety from the patient's fingers, nothing approaches the certainty afforded by pasting down the edges of the shield or bandage with thin strips of absorbent cotton and collodion.

The importance of distinguishing between the essentials and non-essentials of ophthalmic asepsis is in no way so well illustrated as by the various and, from a bacteriologic standpoint, heterodox methods employed by oculists in sterilizing their instruments. An operator who will insist on his patients taking a full bath and on sterilizing every scrap of bandage or cotton that comes within reach of the patient, will rely on some totally inadequate measure for sterilizing his instruments. In the paper by Panas, previously referred to, he says: "All objects used for bandaging, gauze compresses, silk threads, must be sterilized by steam at a temperature of 120 degrees for at least one-half hour. The absorbent cotton, whether in rolls or pledgets, is sterilized in tin boxes or wire baskets at a temperature of 150 degrees." This is not altogether necessary, but it certainly can not be objected to, but the sterilization of the instruments, the most important part of all, he dismisses with the following sentence: "All instruments of whatever kind must be previously immersed into boiling sterilized water to which has been added some bicarbonate of sodium which prevents rusting." Other operators put their instruments for a short time into one of the so-called antiseptic solutions. Now, there are few more pathetic things in the history of medicine than the innocent faith with which many excellent men, with no first-hand knowledge of bacteriology, have relied on the efficacy of everything that any investigator has seen fit to declare a germicide; and nothing has proved more deceptive than a vast amount of work which has been supposed to demonstrate the germicidal value of this or that chemical. The reason for this is found in the ease with which many germs, with their vitality in no way impaired, can be prevented from growing by minute traces of the chemical under investigation. And all the while we have in boiling water a disinfectant which all investigators agree in declaring infallible within certain limits. The comparative unpopularity among oculists of the disinfection of instruments by boiling depends perhaps on the idea that boiling harms the keen edges and points of our instruments. I can not say that boiling has absolutely no such effect, but I do say that after having used the method for seventeen years, I have seen no evidence of it. That instruments are frequently injured while being boiled is true enough; but this is due, in my opinion, to their being rattled about together with the edges unprotected; while if the precaution be taken to wrap the points and blades tightly in cotton, no harm is done by the boiling itself. I have in my case a keratome which I have used at least a dozen times, boiling it from eight to ten minutes each time, which still cuts as well as the day that it came from the sharpener; but to obtain this sort of result, it is necessary also to have the instrument wiped and rewrapped immediately after it has been used. Boiling certainly spoils ivory or bone handles, but not those made of hard rubber, which I prefer to metal. There is one danger, however, which the disinfection by boiling opens the way for: If the instruments are not perfectly dry, a drop of fluid is liable to run down from the fingers to the eye; and to avoid this I have the instruments boiled immediately before each operation and have the water, while it is still boiling hot, poured out of the vessel; the heat which the instruments retain quickly drying off the moisture on the handles, the cover being replaced until the operation begins. A one per cent. solution of carbonate of sodium is perhaps as good as any thing to prevent rusting. Just how long the boiling should be continued is a somewhat open question. The ordinary pus cocci and probably all bacteria, except when in the form of spores, are killed by from one to two minutes boiling in a closed vessel. The spores of most, if not all, the germs commonly recognized as pathogenic are killed by about five minutes' boiling in a closed vessel; while, on the other hand, the spores of certain well-known saprophytes, such as the peptonizing bacilli of milk, will stand from ten to sixteen hours of boiling without apparent injury. Luckily, these germs are entirely harmless, but to allow for the possibility of some new pathogenic germs of unusual resisting powers being present, some compromise, such as a ten-minute boiling, has seemed to me reasonable, always, of course, boiling in a closed vessel. I will confess, however, that when in a hurry I sometimes boil the instruments five minutes only.

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[6] Arch. f. Augenheilk., 46, 2.

Collyria may, of course, be sterilized by boiling, but as cocain solutions lose their strength when boiled repeatedly, I sterilize a small quantity immediately before each operation, by suspending the tube which contains it in a pan in which the swabs for the operation are boiled for ten minutes. After the sterilization of the instruments it is not always so easy to keep them sterile until after the operation is completed, and, while it may seem superfluous, it will, I think, bear frequent repetition that the fingers of the operator, the skin, lashes and lid margins of the patient should all be regarded as more or less septic, no matter how carefully they may have been cleansed, and should not under any circumstances be touched by any instrument that must enter the globe; and the conjunctiva itself and the fluid in the sac should be touched as little as possible.

The management of the thread to be used for sutures is one of the most difficult tasks which the surgeon who wishes to be aseptic has to encounter. The threaded needles can be boiled with the other instruments if the silk be wound on bits of rubber tubing to keep it from getting tangled; but in introducing sutures into the conjunctiva it is very difficult to keep the thread from touching the lashes or skin of the eyelids, even if the patient wears a gauze mask.

With regard to the person of the operator, the full bath can, from a surgical standpoint, be classed with the luxuries, and the same may, I think, be said of the more elaborate attempts at disinfection of the hands, except in the rare cases in which the oculist must touch the tissues with his fingers. In my own experience, I can recall but three cases in which this has been necessary, the disease in each of these being a tumor of the orbit. It is now universally recognized that no method can be relied on to completely sterilize the hands, nevertheless the general surgeon tries to come as near the ideal as possible; but for the oculist it seems to me that anything beyond a good scrubbing with sterile soap and water and a careful drying on a sterile towel is a waste of time except in the rare cases mentioned. With regard to the dress of the operator, a surgical gown or jacket presents a good appearance and may be of some use, but it is far less essential than some form of protection of the nose, mouth, beard and hair, partly on account of the danger of dandruff falling directly on the operative field, but chiefly to hold back the germs from the nose and mouth which, as Flügge and his pupils have shown, are constantly shot out into the air while talking, coughing or sneezing. It is tolerably easy to have caps with face pieces made for this purpose, but nothing is so simple as a double thickness of gauze, about eight inches broad and a yard long. The center of this is placed over the nose, mouth and chin, and the ends crossed behind the head and brought around so as to cover the vertex and forehead as well.

I have thought it best to discriminate against the nonessentials in ophthalmic asepsis because if the methods are simplified there is a better chance that the essentials will receive the scrupulous attention which they deserve.

A paper of this kind necessarily deals with tedious details, and if it has seemed unusually tiresome I can console you with the assurance that I could easily have made it much more so without exhausting the really important features of the subject.

DISCUSSION

ON PAPERS OF RANDOLPH, PUSEY AND GIFFORD.

Dr. Casey A. Wood, Chicago—There is one condition from which it seems to me especially desirable to protect the eye: chronic dacryocystitis with dilatation of the sac and infection of the canaliculus and parts surrounding it, in any operation that involves the opening of the eyeball. I have recently had two cases where I was faced by this problem. It was not possible to treat the condition according to the Hirschberg method for two or three months. I have the same objection that Dr. Gifford referred to in speaking of the use of the galvanocautery. I also object to the extirpation of the sac; it takes too long to heal. I have resorted in a few cases to a little device mentioned by Knapp in his article in Norris and Oliver's System, *i. e.*, shutting off the canaliculi by means of a simple suture, the thread being passed around the canaliculi as near the puncta as possible. No harm results, the suture does not cut through within nine or ten days after the operation, so that the wound in the cornea or sclera has time to heal. My two cases (of chronic dacryocystitis with double cataract) acted so nicely that I can recommend it to you as a simple and efficient device. Before tying the canaliculi I in one case filled up the sac and canaliculus with argyrol; and when the sutures were removed the brown fluid flowed out from both puncta, showing that no adhesion of the walls of the small canals had taken place at the site of the sutures.

Dr. Ira J. Dunn, Erie, Pa.—Dr. Randolph speaks of the action of streptococci not being persistent. I would like to report a case in which they were to me painfully persistent and active.

A foreign body had remained in the cornea for nearly a week. The eye was treated after removal of the foreign body one week when the patient was sent to me. A large sloughing ulcer had formed near the center of the cornea. It was cleaned and cauterized. and iodin, iodoform, etc., were applied in the very careful manner so fully discussed and advised in this Section last year, but with no avail.

The eyeball perforated, panophthalmitis resulted and the eye was enucleated. Infection of the orbit followed, and this extended to the lower lid. The cheek and neck of the corresponding side became swollen and edematous. The opposite side was involved also, but did not slough. Temperature rose above 103. It was in an elderly subject and there was much discomfort and nervous agitation from the systemic disturbance. Three doses of antistreptococcus serum were given within a few hours and after the first dose the temperature began falling, the progress of the orbital inflammation began subsiding and the patient became quiet and comfortable. While there was a large slough in the lower lid there was no further anxiety and little deformity resulted, an artificial eye being comfortably worn.

Dr. W. H. Dudley, Easton, Pa.—For some time I have been in the habit of making an examination of the secretion of inflamed conjunctivæ, and within the past few weeks two cases have come to my office which have demonstrated the importance of doing this as a routine measure in any suspicious case. There is a certain class of cases in which the acute conjunctivitis with the Weeks bacillus will produce a very severe attack. There is usually very little difficulty in diagnosticating a case of gonorrheal ophthalmia, though it may occur.

The first case I refer to was one of gonorrheal ophthalmia, and examination of the secretion in the office at the time showed at once any number of the organisms of Neisser.

A week or two later one of the physicians of our town came in with his lids and conjunctiva swollen almost a duplicate in appearance of the former case. I asked if he were treating any patients with gonorrhea, and he said he was, several. The condition looked alarming. I made an examination of the secretion at once and found it consisting of a pure culture of the pneumococcus. Of course we were both greatly relieved, and this demonstrates the usefulness of making these examinations of the conjunctival secretion when there is a possible question of its character.

Dr. Adolph O. Pfingst, Louisville, Ky.—This subject is of the greatest importance to all of us. The mere fact that the conjunctival folds harbor such pathogenic organisms as the streptococcus, staphylococcus and pneumococcus is a point that should make us consider carefully a thorough sterilizing of the sac. I believe we should carefully cleanse the conjunctival surface of the lids and the edges. We should get out hands as sterile as possible and be prepared in every way just as the general surgeon is. We should leave no possibility of getting these germs into our wound. As to the sterilization of instruments I think the heat doesn't affect the edge of the knives as much as is usually supposed. The dullness is caused more by the operation, cutting through such tissue as the cornea than it is by the boiling.

Dr. A. R. Baker, Cleveland, Ohio—It has been my custom for many years to wrap my knives and forceps in cotton and place them in boiling water. I boil them only a short time. Then while waiting for the anesthesia I amuse myself by wiping the points of the instruments with bits of sterile absorbent cotton held between the forceps in the boiling water. I adopted this practice many years ago from some experiments made for me by a young bacteriologist. We had fewer growths with this way of cleaning the instruments than with any other method. This method of wiping the knives has proven to be sufficient to remove the bacteria.

Dr. E. C. Ellett, Memphis, Tenn.—I would like to mention a method I recently adopted to prevent infection in case of cataract extraction. The case was one of incurable conjunctivitis due to a mixed infection of the staphylococcus and pneumococcus, and the method I resorted to was this: preceding the operation I incised the conjunctiva all around the cornea and dissected it up from the eyeball for a space of about a half inch away from the cornea. I then did the operation of extraction, and picking up the edges of the conjunctiva brought them up over the cornea and sutured them in that position. There was not an undue amount of reaction. The sutures were removed on the fourth day, when the corneal wound was healed and the conjunctiva eventually slipped back to its normal position. The patient got vision of 20/30 without a needling operation.

Dr. W. R. Parker, Detroit—I want to mention one case on which I operated after the method of Dr. Ellett. Without going into details, I followed his method, suturing the conjunctiva over the entire cornea. The sutures were removed on the third day. At the end of the second day after sutures were removed the whole lower portion of the cornea was exposed, and on the third day the whole cornea. Vision was 20/40.

Dr. J. H. Claiborne, New York—The health and vitality of the patient have much to do with the healing of cataract wounds. I had one case that illustrates this very well. An old man of seventy-two, apparently healthy, with clean conjunctiva, was operated on by the combined method. The wound remained unclosed for nine days, and at the end of that time became infected. Inside of ten days or two weeks he developed acute nephritis. I could not trace any source of infection, and could only assume that his vitality had been very much lowered and his tissues were unable to resist the presence of the bacteria in the sac. The older Critchett used to say he would never do a corneal section where the patient was not in good health.

Dr. Harold Gifford, Omaha—In regard to Dr. Ellett's method, while I do not question its originality so far as he is concerned this is a tolerably old idea. De Wecker recommended the purse-string suture for protecting corneal wounds and Kuhnt has been recommending a flap drawn down from above as a protective measure in some cataract extractions. For the last three years I have been using a modification of this method, putting in a purse-string suture beginning and ending at the lower margin of the cornea, but dissecting up only the upper half of the conjunctiva. The suture is thus ready to tighten the instant the extraction is finished, and still the lower part of the cornea is left free. I have used the method in four or five cases of dislocated lens with good results. I have also used it in one case of cataract extraction with dacryocystitis, without a trace of infection.

As to the method referred to by Dr. Baker of sterilizing his instruments, there is no doubt that if you use sterile cotton in this way you can get off most or all of the germs. At the same time you can not tell but what you may just loosen up some of the bacteria which do not come away on the cotton but are ready to come away on your tissues. I think it is certainly safe to boil the instruments for ten minutes. Of course some of the more resistant spores can not be destroyed in that time, but the ordinary pathogenic germs are killed in a few minutes by boiling in a closed vessel; and in ten minutes you can be reasonably sure that your instruments are safe.

He Can Not Afford It.—No man, irrespective of the amount of work he is doing, can afford to remain out of the medical society in his county. He needs the society and the society needs him, and his active work in the society means a broadening of the influence and sphere of usefulness of both. Too many medical men are now in a rut for want of the influence and advantages offered by contact with other medical men in medical societies, and it is to reach such a class of men and to stimulate active members of medical societies to increased effort, that the organization scheme has been proposed by the American Medical Association. The movement is in the right direction and should receive the encouragement and support of all physicians who have their own interests as well as the interests of the medical profession at large in view.—*Ft. Wayne Med. Jour.-Mag.*

SOME CLINICAL ASPECTS OF TUBERCULAR PERITONITIS.*

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Among the many startling results that have followed the introduction of laparotomy, exploratory or curative, none shows a more decided departure from beliefs of a former generation than the present attitude of the profession with regard to tubercular peritonitis. The surprising clinical fact, recorded by Sir Spencer Wells, that a case of tubercular peritonitis, accidentally opened under a mistaken diagnosis of ovarian tumor, should not only recover from the immediate effect of the operation, but promptly go on to apparent recovery, and end in perfect restoration to health was so anomalous a history that it savored of the miraculous. This was before the days of bacteriology, and while the battle as to the single or dual nature of tuberculosis was a great pathologic issue. With the knowledge of the bacillus as the one essential feature in causation, and with the great advance in surgical technic, the pathologic relations, as well as the clinical features, have received a more critical study, and much light has been gained.

Brunn[1] gives a most comprehensive review of the literature of this subject from 1885-1900. Our knowledge may be said to have reached its greatest development in this period. Many of the tables and references are taken from an analysis of this review. Of some 28,000 cases coming to autopsy, many of these were healed, many showed co-existing diseases of other organs. Tubercular peritonitis was found in 2¾ per cent. As early as Morgagni we find descriptions of tubercular peritonitis, with the significant statement that it frequently occurred with pulmonary tuberculosis, and a suggestion of the similarity of adhesions here formed with those observed in the pleuræ and pericardium. Almost a century of study has thus been given to this particular form of tubercular disease.

The peritoneum may be one of the sites of local manifestation of a generalized miliary tuberculosis, but the term tubercular peritonitis is generally understood to apply to the chronic form of the disease, which in a measure constitutes a distinct affection. Even here the process is usually secondary to disease, appearing primarily in some distant part, most commonly the lungs; or the peritoneal involvement may follow by direct extension or by dissemination through the lymph paths, or by a simple process of grafting from a previously ruptured tubercular focus having access to the peritoneal sac, and sowing, as it were, the elements of the disease over the entire membrane.

As primary foci near the abdominal cavity may be mentioned psoas abscess, caries of the *vertebræ*, tuberculosis of the genitourinary tract in both male and female, including the suprarenal gland, tubercular ulceration of the intestine, solitary tubercle of the spleen, and tubercular disease of the retroperitoneal glands. Some cases of tubercular peritonitis appear to be primary, as shown partly by the manifestly greater age of the diseased parts of the peritoneum when contrasted with the evidence of tuberculosis in the other organs, in part by the absence of any other discoverable tubercular deposit. In children the appearance of primary tubercular peritonitis is more frequent than in adults; of 22 cases reported by Rilliet and Barthez, 12 were classified as primary.

Tubercles may be distributed uniformly, more or less thickly set, over the entire peritoneum, or they may form nodular masses of varying sizes which undergo caseous or ulcerative changes, and thereby furnish the nucleus of secondary daughter tubercles in the vicinity.

With such multiplicity of lesions, and with the symptoms of the primary pathologic process complicating most irregularly the clinical picture of the peritoneal affection, it is not surprising that there should be a wide range in the symptomatology. On the basis of the postmortem findings various classifications have been made. The simplest recognizes two forms, the dry and the exudative, including under the latter head the caseous and the purulent varieties.

From a clinical standpoint Hawkins divides all cases into four varieties:

1. Latent.
2. Severe, with ascites and a spontaneous tendency to remissions or encapsulations.
3. Cheesy purulent form, with frequent formations of large caseous masses and adhesions.
4. Fibrous-adhesive form.

The French and English authorities generally describe three varieties:

1. Ascitic.
2. Fibro-adherent.
3. Ulcerative form with or without suppuration;

while Galvani gives five, and Aldibert has some eleven subdivisions.

Judging by inoculation experiments, differences in the pathologic product of the bacilli depend in some degree on the source of infection. Injection into the peritoneum made with fluid obtained after weakening of the bacilli in sputum by exposure to a temperature of 60 degrees, produces rather the fibroid; the use of a fluid rich in bacilli or of unemulsified sputum, the cheesy, purulent variety.

Injection of the first tuberculin of Koch produced no reaction, whereas the tuberculin R caused proliferation of the intestinal serosa.

The general symptoms of tubercular peritonitis are pain, fever, emaciation, anemia, anorexia, to which are to be added as more purely local manifestations, change in the contour of the abdomen, ascites, diarrhea, or constipation; and, occasionally, redness or inflammation about the umbilicus, with possible perforation and formation of a suppurating sinus or of a fecal fistula; profuse and very exhaustive sweats occur in the caseous and ulcerative varieties. Of physical signs, the most important may be properly said to be the alteration in the impressions conveyed by palpation, whether in the dry or exudative cases. In children, particularly, the examiner is apt to be impressed by the manifest malnutrition, so that there is a striking contrast between the distended abdomen and the general emaciation. With the patient on the back and the abdomen relaxed to the utmost possible extent, there will usually be noted an oval or round distension of the cavity, very different from that due to ascites, arising from other causes. There is not the tendency to bagging in the groin, or above the iliac fossa. If liquid be present, it is rarely perfectly free in the abdominal cavity, being bounded in one or other direction by firm adhesions. After absorption of this fluid the exploring hand experiences a sense of tension or hardness in the abdominal wall, a peculiar elastic resistance, which, according to Grisolle,

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank A. Jones and W. S. Thayer.

[1] Cent. f. allg. Path. u. Path. Anat., 1902.

I am heartily in accord. Wheeler also advises against drainage, owing to the likelihood of a fistula, fecal or tubercular.

The operation has been particularly recommended for exudative cases in children, but in the last number of the *Archives of Pediatrics*, Guthrie gives a summary of some personal experience showing recoveries with and without operation in the ratio of 16 per cent. to 50 per cent. His language in condemning the operation is not without a tinge of bitterness.

Jaffé has shown that many cases reported as cured still contained at the time when they subsequently came to autopsy, smoldering foci of tubercular disease, which required apparently but the merest accident for general dissemination, or for reappearance of the local process in active form.

The opinion that a diagnosis of tubercular peritonitis calls for immediate laparotomy is certainly erroneous, not to say vicious. It would be responsible for many deaths. In the hands of the most skilled surgeon the mortality incidental to the operation *per se* is not less than 10 per cent. Cases requiring relief by operation can be temporarily improved by simple puncture and withdrawal of the fluid. The majority of such cases under the tonic regimen will end in recovery without operation. It will be found that some cases will disappoint every expectation of improvement, under any plan of treatment, and again complete recovery will follow under conditions apparently most unpromising. What the particular factor is that determines the issue must still be doubtful, but increasing experience and most careful analysis of figures would lead us to place it in that unknown chemical and physiologic property, the native resistance of tissues. We may assume a variability in the toxic properties of bacilli, even as we see variations in structural details; and this variability plus the equally variable inherent constitutional resistance gives us our equation, whose resultant is naturally most inconstant. It is certain that the peritoneum, perhaps even in greater degree than most other serous membranes, possesses the property of finally disposing of the tubercle bacillus, by a process of fibroid inclusions, so effective that it not only results in a limitation of the infected area, but often in the actual destruction and disappearance of the pathogenic germ. We find ourselves coming back to the standpoint, which Virchow investigated in his studies of the "combat between the cells and the bacilli," and, while sparing no endeavor to limit the possibilities of entry of the bacillus, and to render innocuous those sources of infection easily controlled, it will be found that our best weapon lies in so fortifying the cells which, in the final test, must bear the brunt of the fight, that the natural processes of reactive inflammation may lead to the development of organized fibroid tissue. As in the fight against tuberculosis in the larger arena, so here the solution will be found in giving to the patient, in greatest abundance, good food, pure air, unbroken rest, and ease of mind. It is not that we would slight the surgical management of such cases; but surely that science is best which by early recognition of diseased conditions and prompt institution of appropriate remedies protects the patient from the necessity of submitting to the hazard of operation, with the possibility of no permanent relief. Immediate recovery from the effect of the operation can not be counted an advantage. It remains for collective investigation to show the percentage of patients in good health six months after the operation, before determining the position of laparatomy.

As illustrating somewhat different types, I append a brief history of the following cases:

Case 1.—Discrete tubercles of peritoneum, probably secondary to appendicitis, with ulceration discovered at operation for appendicitis. Recovery.

S. R., aged 12. Has had repeated attacks of appendicitis, some very severe, others of less duration and intensity, coming on as often as every two months in the year preceding operation. Boy always pale, thin and feeble. Bowels habitually constipated; no appetite. In intervals between attacks no tenderness of abdomen, no induration or sensitiveness anywhere about abdomen. Operation for removal of appendix in February, 1892. Appendix thickened, surrounded by adherent omentum and intestinal coils, small perforation with sacculated cavity containing a few drops of pus. Neighboring loops of small intestine, and parietal peritoneum showed limited number of gray nodules, firm, translucent, surrounded by a pigmented crescent, but apparently giving rise to little, if any, local reaction. Recovery after operation prompt. No subsequent symptoms except slight hernia in line of incision relieved by second operation. Young man to-day enjoys excellent health. There was no family history of tubercular disease; no signs of pulmonary or other involvement preceding operation.

Case 2.—Generalized chronic tubercular peritonitis, with special localization about liver, producing chronic perihepatitis. Ascites. Repeated puncture. Death.

J. H. patient male, aged 54, single; generous liver. Family history good. History of persistent alcoholism, never carried to excess. Taken sick with sudden pain in abdomen, most marked in right hypochondrium; chills, fever of intermittent type; anorexia, constipation, gradually increasing distension of abdomen, dyspnea, emaciation, anorexia, subsidence of fever, but increase of abdominal swelling. No cardiac or renal disease; no jaundice. Physical examination shows abdomen distended with ascitic fluid, freely movable. Liver dulness not easily made out. Some tenderness or palpation over abdomen. After withdrawal of 2½ gallons of straw-colored fluid liver dulness found to be slightly increased. Abdominal walls apparently thickened and unusually resisting. No fever. Reaccumulation of fluid in very brief period. Death six months after onset of symptoms from exhaustion. Autopsy confined to abdominal cavity. Chronic perihepatitis (capsule thickened so as to measure half an inch), generalized tuberculosis, parietal peritoneum about one-quarter inch in thickness, intestinal coils showing few adhesions. Retroperitoneal glands enlarged, reddened, no tubercular infiltration. Diagnosis corroborated by microscopic sections.

Case 3.—Dry adhesive peritonitis with caseous salpingitis. Operation. Final recovery after prolonged suppuration from tubercular sinus.

L. B., aged 21, dressmaker. Fairly well nourished, single. Family history, several deaths from tuberculosis in direct ancestry. Never been very robust, menstruation at 15, fairly regular, painful. Appetite poor, chronic constipation. No fever. Some pain in back and tenderness over abdomen. Physical examination, no pulmonary involvement. Abdomen oval, distended, rather resistant, no mass or induration. No fluid. Diagnosis, tubercular peritonitis. Under general measures and attention to bowels some improvement. Four months later patient passed through attack of typhoid fever of moderate severity, during which persistent abdominal distension was most distressing symptom. Complete recovery from typhoid. Pain in abdomen dull, heavy and variable, continued. Operation. General matting together of all viscera; omentum stretched tightly in front had to be detached from borders of pelvic cavity, showing caseous tuberculous infiltration and softening of both tubes, several tubercular abscesses in pelvic cavity. Following operation patient has gained some in weight, the temperature slightly lower in range, but still persistent. Exudate still being poured out, however, showing the process still active.

Removal of adnexa, cleaning out of tubercular debris, irrigation and drainage. Tedious recovery and persistence of discharge from sinus left after removal of drainage tube. Irrigation of fistulous tract with zinc chlorid solution; no effect. Following use of small quantity of peroxid of hydrogen, marked and sudden increase of pain in abdomen with collapse, probably giving way of adhesions due to pressure of liberated gases when peroxid reached deeper parts of tract. From this time on marked aggravation of symptoms, increased discharge, great pain on movement, some fever, final and complete recovery about five months after operation.

Case 4.—Chronic tubercular peritonitis with sacculation by formation of an artificial diaphragm across lower part of retracted intestines and mesentery. Operation for movable kidney a year earlier showed no tubercular disease in abdomen. History furnished by Dr S. P. Kramer, with whom this case was seen in second operation. Tubercular fistula, still discharging.

Mrs. E. T., housewife, aged 33. Mother of five children, all healthy. One brother dead from tuberculosis. Other family history negative. March 20, 1902, operated for floating kidney, right side. At that time pelvic organs normal. Present illness of about six months' duration. Abdominal distress, intestinal indigestion, great deal of flatus and pain in bowels. For past two months gradually increased dropsical swelling in lower part of abdomen. Temperature ranges from 99 F. in morning to 101 in evening. Examination shows fluid in abdomen, serous in character. Confined to lower segment of abdomen and pelvis. Abdominal walls tense, protruding; eversion of umbilicus, no tumor discoverable. Bowel resonance does not change when position of patient is changed. Abdominal walls thickened by peritoneal deposits. Ovaries and tubes matted together so that they can not be palpated. Menstruation regular and normal. Urine normal. Feb. 12, 1903, laparotomy. Ovaries and tubes markedly tubercular; parietal peritoneum, having deposits of tubercles and tubercular hypertrophy. Pelvic organs separated from intestines by about three quarts of bloody serous fluid, which became partly gelatinous on exposure. Above the fluid there had formed a diaphragm of adhesion completely walling off the intestine from the cavity occupied by the fluid.

Ovaries and tubes removed. Abdomen closed without drainage. Primary union. On the twelfth day discharge from the lower angle of wound of about half pint of same fluid as before. At this point there formed a fistula the size of a pin head, which continued to discharge serous fluid up to date of discharge, March 14, 1903.

Case 5.—Tubercular peritonitis wih slight ascites. Chronic pleurisy, operation, no improvement. Occurred in gynecologic service of my friend Dr. Withrow at Cincinnati Hospital.

E. Y., female, aged 32, housework, colored. Family history not known. Menstruation at 16, regular, lasting four to five days. Complains of pain in abdomen, especially low down in left side, extending down left leg. Some backache coming on in paroxysms; never pregnant. Admitted to Cincinnati Hospital Jan. 18, 1903. Unable to work for three months past. Swelling of abdomen began about three weeks before admission so severe that she could not wear her clothes. Swelling at first more marked on left side. Swelling varied from time to time. Not much pain. T. 100.2, P. 108, R. 24. Slight tendency to constipation. *No appetite.* Some resistance on palpation over lower half of abdomen, where resistance is more marked, where there is no tenderness on deep pressure. On day after admission dulness over left lower quadrant; remainder of abdomen tympanitic. Enema to unload bowel did not change physical signs. Next day dulness had completely disappeared. Vaginal examination negative. Evening temperature 102. Five days after admission dull area in lower left quadrant again present, extending somewhat beyond median line to right. Two days later dull area on left side does not reach to median line. I saw the case eleven days after admission. There could then be made out a small quantity of fluid in left chest, an *indurated* mass lying transversely across abdomen just below umbilicus, about 1½ inches in thickness, 4½ inches in length, not tender, slightly movable. Peculiar doughy *elasticity* of abdominal walls. Evening temperature reached 104. Laparotomy February 4. Incision 1½ inches in length in median line. Peritoneum thickened and gelatinous. About a quart of straw-colored fluid escaped. Peritoneum everywhere thickly studded with tubercles, those in the pelvis larger than on intestinal or parietal layers. Wound closed. Union by first intention. Apparently nothing gained by operation. Temperature ranges for next month, during which time patient was under observation, continued same as before.

Case 6.—Tubercular peritonitis, secondary to ulceration of intestine. Indurated bowel palpated through abdominal wall. Laparotomy; death in eight hours.

Mrs. E. D., aged 48. Married, one child, housewife. Still menstruating, never robust, but always well until one year ago. Began to have some pain in abdomen. Pain at first not constant; abdomen always sensitive, so that weight of hand accidentally resting on it as she lay in bed was painful. Not much appetite. Fever for three months with pretty constant diarrhea. Large liquid stools. *Anorexia.* Lately very profuse sweating. Abdomen tense, oval distension. A movable cylindrical mass felt in right iliac fossa. No pulmonary symptoms. Vaginal examination negative. Diagnosis, tuberculosis of bowel with peritonitis. Operation. Several areas of cylindrical induration of bowel discovered, making resection impossible. Pelvic viscera and entire parietal and visceral peritoneum covered with recent tubercles. Wound closed. Patient never rallied. Death in six hours.

Case 7.—Secondary to tubercular pleurisy, adhesive form. Laparotomy. Death in three days.

J. H., saloonkeeper, aged 37. Brother died of phthisis. Always well until two years ago; had grippe. Pleurisy with exudation, relieved by repeated aspiration. Final obliteration of pleural sac. Abdominal distension gradually growing worse for six months. Slight fever, emaciation, obstinate constipation. Physical examination shows dulness over the base of the right lung posteriorly, due to the greatly thickened pleura. Breath sounds very distant. The abdomen distended, irregular areas of dulness in the midst of tympanitic resonance. Diagnosis, tubercular peritonitis with sacculation. Operation. All viscera matted together. A few small pockets of fluid are broken up; possibly eight ounces of turbid liquid escaped. Wound closed. Death on the third day.

Case 8.—Pain in abdomen. No ascites, no fever.

Child, aged 11. Family history good. No previous illness. Sick four months. Characteristic distension of abdomen. Tenderness on pressure slight. Principal pain comes on after eating so that the boy fears to take food. Steady emaciation. No fever. Bowels *constipated.* In right iliac fossa a mass can be felt as though made up of adherent omentum; this is not particularly tender. Owing to prominence of gastric symptoms, test meal was given. Analysis showed normal condition of gastric juice. Treatment, rest in bed. Forced feeding. Still under observation.

Frequency, as Determined by Autopsy Findings.

	Cases.	Autopsies.
Schalmack ....(378)	54	5,425
Münsterman ....(383)	46	2,837
Phillips ....(384)	107	2,230
Sick ....(521)	46	2,500
Steger ....(395)	283	3,493
Adossides ....(396)	74	4,815
Herringham ....(586)	56	2,297
Borske ....(394)	226	4,250
Total	792	27,847

Cases.	Males. Per cent.	Females. Per cent.	Males. Proport'n.	Females. Proport'n.
Under 10 years....	45.5	54.5	7.0	9.0
10 to 20 years......	14.3	85.7	1.0	6.0
Above 20 years.....	6.7	93.3	1.0	22.5
	(Lindner.)		(Dresduer.)	

	Males.	Females.
Adossides' table of children..........	34 per cent.	66 per cent.
Adossides' table of adults...........	10 per cent.	90 per cent.

	Cases.	Males.	Females.
Vierodt	24	19	5
Fenwick	46	30	16
Schalmack (in 5,425 autopsies)........	54	33	21
Munsterman (2,837 autopsies, 903 tub.)..	46	33	13
Phillips (2,230 autopsies)...............	107	89	18
Sick (2,500 autopsies)...................	46	31	15
Steger (3,493 autopsies, 929 tub.).......	283	151	132

	Cases.	Males.	Females.
Adossides (4,815 autopsies)	74	53	21
Haene	46	18	28
Schultz (all children under 13)	32	15	17
Schroeder	24	9	15
Total	782	481	301

Relative morbidity of male and female: Total, 782 cases; males, 481 cases; females, 301 cases.

DISCUSSION.

Dr. E. J. Brown, Decatur, Ill.—Dr. Fenger, several years ago, advised against operation in these cases, showing that the mortality with the so-called medical treatment was less than with the surgical treatment. I think it is very discreditable to the profession to give a bad prognosis in tuberculous peritonitis. I have seen three cases, in which the surgeon who was called in consultation advised operation, all improve without operation.

Dr. James Tyson, Philadelphia—As a physician my experience with tuberculous peritonitis has not been large, but so far as it has gone I have about concluded that to treat it medically is to temporize; in other words, that there is but one treatment that is likely to lead to satisfactory results, and that is surgical.

TUBERCULOSIS IN THE NEGRO.*

SEALE HARRIS, M.D.

Health Officer of Bullock County from 1895 to 1903; President of the Southeastern Alabama Medical League; Councilor of the Alabama State Medical Association.

UNION SPRINGS, ALA.

Tuberculosis was a rare disease among the slaves in the southern states, yet, after a little more than a quarter of a century, it causes more deaths among the emancipated negroes than all the other infectious diseases. The negro death rate from tuberculosis is more than three times that of the whites from the same disease.

These statements, as startling to some as they are true, announce the motive which induced me to select for my theme on this occasion, "Tuberculosis in the Negro"; and if I can be the means of inciting any of you to consider the causes of this enormous mortality from that disease in the negro race and the measures to be taken for their relief, the objects of this paper will have been attained.

From the best information which I can gather, tuberculosis is unknown among the savage tribes in the interior of Africa. It is also unquestionably true that the negroes along the west coast of Africa were not affected by tuberculosis until the infection was carried there by the slave traders and colonists. However, since their exposure to the infection, the negroes in their native clime are not only more susceptible to tuberculosis than the white colonists who reside there, but the disease is more fatal among them. This is shown by the following table (Dr. Rudolph Matas, "The Surgical Peculiarities of the Negro"), which gives the mortality from tuberculosis in the English colonies for the negroes and whites on a basis of each 1,000 deaths:

	English.	Negroes.
Jamaica	7.5	10.3
Dominica	8 3	16.8
Guiana	6 4	17.9
Ceylon	4.9	10.5
Gibraltar	5.3	43.0

Tuberculosis was so rare among the slaves in the southern states that some physicians contended that the negro was immune to tuberculosis. I have heard large slave owners, and several physicians who had large practices among the slaves in Georgia and Alabama, say that they never knew of a case of consumption among the negroes prior to the war. The disease was so rare that in 1830 a Cincinnati physician reported a case of a negro with "undoubted consumption," in which the autopsy showed "unmistakable evidences of the disease." There were no doubt a few cases among the slaves, but the disease was rare and confined almost entirely to the slaves in the cities, where they were overcrowded and the sanitary conditions were bad. The fact that there were so few cases of tuberculosis among the negroes while they were slaves was a great triumph of intelligent, though enforced, hygiene, and it also proves that tuberculosis is a preventable disease, because prior to the war it was not of infrequent occurrence among the whites of the South. That consumption is almost a scourge to the emancipated negro we all know, and the only reason why it was not so with the slaves was that their habits and sanitary surroundings were better than those of many of their masters.

Because of their indolence and improvidence, I am sure that the majority of negroes in the South do not get a sufficient amount of the proper nourishing food and the other necessities of life on which to maintain health and vitality up to the normal, and such lack of nutrition, added to the worst possible ignorance and carelessness pertaining to personal hygiene, renders his tissues less resistant to bacterial infection of all kinds. In other words, it makes the tissues of the negro a suitable pabulum or soil for the invasion and propagation of the bacillus of tuberculosis. We also know that unless the tuberculous subject is well nourished he has but little hopes of recovery, and I am sure that one of the reasons why there are so few recoveries from tuberculosis in the negro race is that, as a rule, they are not provided with a sufficient quantity of palatable and nutritious food.

The following statistics of Charleston, S. C., which have been accurately kept for many years, show the increase in tuberculosis among the negroes since their emancipation: In 1860 the negro death rate was the same as for the whites, i. e., 12.00 per 1,000. The last census gives the white death rate in that city as 21.4, and the negro death rate of 43.1 per 1,000 of population. The deaths from "consumption," calculated at ten-year intervals, were in 1865, whites 57, negroes 74; 1875, whites, 54, negroes, 132; 1885, whites 57, negroes 209; and in 1895, whites 39, negroes 194. Estimated population in 1895 was, whites, 28,870; negroes, 36,295.

The census returns for the year 1900 show, in the "registration area," in which the statistics may be regarded as fairly accurate, that for every 100,000 of population there died from "consumption" 126.5 native whites and 485.0 of negroes.

I regret that I am unable to give any statistics regarding the mortality from tuberculosis in Alabama and the other southern states. I studied the census returns carefully and found but little that I thought would be of interest or value. The following letter came to my relief, and caused me to destroy most of the data which I had compiled from the census report, and I quote from it to show the fallacy of deductions based on mortality statistics of the United States Census Report, except those for the "registration area":

Census Office, Washington, D. C., Sept. 20, 1902.

Dr. Seale Harris, Union Springs, Ala.

Dear Sir:—I regret to state that this office can not furnish you any data that are of any value concerning either the general death-rate of the white and colored in the United States as a whole, the southern states, or for South Carolina and Alabama individually, or the mortality of these classes from tuberculosis.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank A. Jones and W. S. Thayer.

The return of deaths in all of the southern states and in most of the other states was secured by inquiry of the enumerators, and falls very far short of being complete. In fact, the return is absolutely worthless for the purpose of computing death rates and any conclusions based on them would be erroneous. It is only in those states and cities that have efficient systems of registering deaths that we are able to secure anything like a correct return of the deaths that actually occur which can be utilized for determining the death rates. Unfortunately, there are no southern states, and very few cities which have a complete system of registration, and prior to 1890 this source of information was not utilized in any way in census statistics. Very respectfully,

W. A. King, Chief Statistician.

The statistics for some of the southern cities are regarded as being as accurate as those for the *registration* area, and below I give reports of five representative southern cities:

Rates per 1,000 of Population.

	All Causes.				Tubercular Diseases.			
	1890.		1900.		1890.		1900.	
	Wh.	N.	Wh.	N.	Wh.	N.	Wh.	N.
New Orleans	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mobile, Ala..	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Charleston, S. C.......	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Savannah, Ga.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Richmond, Va.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

The statistics which I have collected for Union Springs, with an equal population of whites and negroes, and which I think are reliable, show that in the past eight years there have died from tuberculosis fourteen whites and thirty-nine blacks; and of the considerable number of negro deaths reported with the cause of death unknown, I am sure that several died of tuberculosis. I do not know of any other statistics of any value for the small towns or rural districts of the South, for the reasons that the majority of deaths occur without the attendance of a physician, and are reported by midwives and undertakers, who know nothing of the causes of death.

The great prevalence of tuberculosis is not so much due to any inherent tendency to the disease as to their habits and environments, which render their tissues less resistant to the tubercle bacilli, and for the same reasons they fall easy victims to its ravages. However, it is no doubt true that there is a less development of lung tissue and the accessory muscles of respiration among the negroes than for the whites. Dr. McDowell, a surgeon in the United States Army, made frequent autopsies on white and colored troops during the Civil War, from 1861 to 1865. He found that their chest measurements were full (up to the army standard), but their lungs were always lighter and smaller than those contained in the same sized chest among the white troops. The statistics of Otis and Woodward for the same period are interesting. They found a less lung capacity and smaller brain for the negro troops than for the whites. They also found that of whites who contracted tuberculosis during the war, one out of two and one-half died, while of negroes twelve out of thirteen died. Dr. Russell, another army surgeon, states that the average weight of the negro was four ounces less than that of the white.

F. L. Hoffman[1] gives the following interesting table, which he compiled from the report of the Provost-General (Vol. I), and the reports of the Surgeon-General, U. S. A., 1893-94-95, which shows the difference in chest expansion of the slaves who entered the army, and of the emancipated negro of thirty years later:

Comparative Chest Mobility of U. S. Recruits, 1861-65 and 1892-94:

Age Periods.	U. S. Army, 1861-65. White.	U. S. Army, 1861-65. Colored.	U. S. Army, 1892-94. White.	U. S. Army, 1892-94. Colored.
Under 20 years......	3.26	3.17*	2.82	2.56*
20 to 24 years......	3.25	3.28†	2.86	2.52*
25 to 29 years......	3.22	3.25†	2.93	2.62*
30 to 34 years......	3.22	3.19*	2.96	2.64*
35 to 39 years......	3.26	3.18*	2.94	2.57*
40 to 49 years......	3.18	3.34†	2.84	2.52*
All ages	3.24	3.23*	2.93	2.58*

* Excess in favor of white. † Excess in favor of colored.

This table clearly proves that there has been a diminution in the chest expansion of the negro since his release from slavery.

Gould has proven that the average lung capacity of the negro is considerably less than that of the white. Thus, for the average height of 5 feet 8 inches, the pulmonary capacity was for the whites 188.5 cubic inches, for the negro, 167.5 cubic inches—giving a mean difference in favor of the whites of 15.0 cubic inches. The pulmonary capacity of the average chest measuring thirty-six inches in circumference was for the whites 186.5, for the negro, 170.5—thus showing a mean difference of 16 cubic inches in favor of the whites.[2] Dr. R. M. Cunningham[3] has called attention to the "more or less encroachment of the abdominal organs on the thoracic viscera, and for that reason the perpendicular diameter of the chest of the negro is less than that of the same sized white." My observations, carried out on the line of Dr. Cunningham's ideas, from the examination of many healthy chests among the negroes, show that the normal liver dulness on the right side, sometimes extending as high as the fifth rib, and the tympanitic note over the stomach on the left side (Traube's semilunar space) of the negro are higher than that of the whites. I have also noted that Litten's diaphragm phenomenon is less marked in the normal negro than in the white.

Thus all observers agree that there is less development of the lungs of the negro than for the whites, and this physiologic difference no doubt accounts for, in a measure, the inordinate mortality from consumption, pneumonia, and the other pulmonary diseases among the negroes.

Dr. M. L. Perry, pathologist of the State Sanitarium of Georgia, examined the brains of 100 whites and the brains of 100 negroes. He found that the average weight of the brain of the negro was 100 grams, or 3½ ounces less than that of the whites. It is also well known that in the brain of the negro the convolutions are less complex, and the sulci are shallower than that of the Caucasian, which, added to the fact that his brain is smaller, gives the negro considerable less gray matter than for the white. Thus the negro's brain approaches nearer the Simian type than that of the Caucasian, which, according to our ideas of evolution, would place him on a slightly lower scale as a man than his white brother. Probably for this reason they are lacking in the inherent vital nerve forces which in serious illness is sufficient to make them succumb to all diseases, particularly those of a wasting nature like tuberculosis, than does his white brother, who is endowed with a better developed brain structure. I am sure that even under the most favorable circumstances, which I am sorry to say is given to but few of their sick, the negro dies more readily from all forms of disease. I have known of many whites who have recovered from consumption when the treatment was begun early, but of the large number of cases which I have treated among the negroes I have seen but a few who showed even temporary improvement, and only one who recovered from the disease.

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[1] Race Traits and Tendencies of the American Negro, page 161.

[2] Gould, Military Statistics, pp. 480 and 493.

[3] The Negro as a Convict, Transactions of the Alabama State Medical Association, 1893, p. 321.

I would not be understood as meaning that there are any inherent differences in structure of the tissues of the whites and blacks—only a difference in development. The whites have many centuries of enlightenment and civilization under such varied conditions that there has been the psychical and physical development, which fits him to endure the manifold dangers of disease which beset us in our struggle for existence in this complex age, while the negro, a century or two ago, was a savage, perhaps a cannibal, who needed only to provide himself with food, of which nature so lavishes both animal and vegetable in the forest of the tropics of Africa. The heat of that climate made it unnecessary for him to have clothing to protect his body, and with the low altitude and the warm, humid atmosphere, less oxygen was required to maintain body temperature, so there was a corresponding lack of development of the lungs of the native African. This, the hygienic life which he was compelled to lead as a slave, was overcome to a great extent, as is shown by the table compiled by Hoffman, which makes it clear that the chest expansion of the negro was nearly, if not quite, equal to that of the whites in 1861-5, while in 1892-4 it was considerably less. However, the life of a slave did not fit the negro to provide for himself in a climate entirely different in environment to that which his ancestors had lived for ages, and the utter incapacity of the majority of negroes to take care of themselves and families in this climate is the great underlying reason why tuberculosis, which finds its victims in those of a lowered state of vitality, has increased so rapidly, and almost always proves fatal among the members of this unfortunate race.

The filthy habit of spitting shows its highest development among the colored population. Nearly all the men chew tobacco and their women use snuff, and the healthy and the tuberculous alike spit on the floors of many of their homes and churches. The best of their churches are provided with boxes filled with dry sand or sawdust into which they expectorate. The sputum, either on the floors or in the boxes, becomes dry and gets into the dust of the atmosphere, and the bacilli are inhaled in large numbers, and, lodging on lung tissue already weakened from the causes of which I have spoken, they find a favorable soil for their development. When we remember that the consumptive, with a cavity in his lungs, expectorates from 2,500,000,000 to 4,000,000,000 germs in twenty-four hours (Nuttall), and that tuberculosis is so prevalent among the negroes, we can see that this is no chimerical idea that their churches are among the great disseminators of tuberculosis.

Syphilis is not in the least allied to tuberculosis, but it is a well-known fact that syphilitics die from tuberculous diseases. Syphilis is certainly one of the great predisposing causes of tuberculosis, and the great increase in syphilis in the past thirty years has been *pari passu* with that of tuberculosis.

Gonorrhea, on account of their habits of licentiousness, is one of the most frequent diseases among negro men, and every physician who has examined many negro women knows how frequently they are afflicted with "pus tubes." Osler says: "Tuberculous peritonitis in America is a more common disease in the negro than in the white race, and recently collected statistics show that females predominate." Kelly has shown that a very considerable proportion of all cases is secondary to tuberculosis of the fallopian tubes. It is also well known that in man tuberculosis of the seminal vesicles often precedes the development of the disease in the peritoneum. My own observation has been that tuberculous peritonitis is a very much more frequent disease in the negro than in the white race, and that it is several times more frequent in women than in men. For this reason I am inclined to the opinion that gonorrheal salpingitis, prostatitis and seminal vesiculitis prepare the soil for the bacilli of tuberculosis, and from these loci minoris resistentiæ the disease originates and extends to the peritoneum. Therefore, it seems that the gonococcus is the indirect cause of a considerable proportion of negro deaths from tuberculosis.

A great many negro children die from tuberculous peritonitis, which is frequently secondary to the disease in the intestines, and I have no doubt but that the causes of death in many cases reported as gastroenteritis are really enteritis and peritonitis of tuberculous origin.

Nasal catarrhs, tonsillitis, bronchitis and other troubles which are commonly called colds, which are frequent precursors of phthisis pulmonalis, are very prevalent among the negroes, and are rarely ever treated. They are exposed to all kinds of weather, and in winter many of them do not have sufficient clothing to keep the surface of the body warm. Their lack of personal cleanliness, as is demonstrated by their proverbially characteristic odor, which, by the way, is not so noticeable in those who bathe frequently and regularly, prevents the skin from acting freely, therefore, predisposing factors in the development of so much consumption among the negroes, and for the same reasons they are prone to the most virulent types, i. e., acute pneumonia phthisis, phthisis florida or "galloping consumption." Those of us who have treated many cases of tuberculosis among the negroes have seen them die from the acute pneumonic type in a few days or weeks. I am quite sure that many of the deaths reported as due to pneumonia really result from acute pneumonic or bronchopneumonic phthisis.

While the lungs of the negro are the organs most frequently attacked by tuberculosis, he is subject to all its protean forms. Tuberculous pleurisy and meningitis and tuberculous disease of bones and joints are of frequent occurrence among them. Indeed, there is hardly a tuberculous condition which I have seen described that I have not seen in the negro. Lupus seems to be less prevalent among them than any other form of tuberculosis. Lupus, however, seems to be a rare disease in the South.

That tuberculosis is so prevalent among the negroe everyone admits, yet every year goes by and almost nothing is done to stay the hand of this fearful disease, which, with the other diseases to which the emancipated negro is especially prone, threatens the extinction of the negro race and, indeed, greatly endangers the happiness and lives of the whites of the South. This is no new theory with me. Hundreds of other physicians in the South hold to the same opinion, but the whites generally and the negroes do not seem to realize the danger which threatens to almost exterminate the "ward of the nation."

F. L. Hoffman[4] says: "It can be proven at the present time that the colored race is subject to an inordinate mortality from consumption and respiratory diseases, which will menace the very existence of the race in the not far distant future."

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[4] Race Traits and Tendencies of the American Negro, p. 82.

Dr. Cunningham says in his paper on the "Negro as Convict": "In conclusion, I will submit that the race problem will be largely settled in the event of public works being established throughout the South, which means ready money for the negro; that means the profitable practice of prostitution; that means gonorrhea and consequent sterility; tuberculosis will do the rest."

Dr. Rudolph Matas,[5] in his splendid and comprehensive paper on "The Surgical Peculiarities of the American Negro," makes the following statement: "Tuberculosis has been called the "great white plague"; but if we look at this matter statistically and through the eyes of all experienced observers we would with greater propriety call it the black plague, as it is unquestionably the dominant cause of the increasing death rate of the negro in this country."

Dr. P. B. Barringer, Chairman of the Faculty of the University of Virginia, in his masterly address before the Montgomery (Ala.) "Race Congress," placed tuberculosis as the principal factor in "that grand but ghastly tragedy—the sacrifice of a race."

I am not an alarmist, and this paper, which calls particular attention to the weak points of the negro, is written for no other purpose than to call attention to the alarming increase of tuberculosis in that race, with the hope that something may be done which will lessen the frightful mortality of the disease in this generally kind-hearted people. The South is doing a noble part by the negro in the line of education, and I am glad that it is so, because without the guiding and protecting hand of a master, the African and his descendants in this climate and this strenuous age can only hope to survive the struggle for an existence through the education of their minds and the training and development of their bodies. If for no other reason than that of self-protection, it is high time that the whites of the South, on whom must fall all the cares and responsibilities of managing the affairs of state for the public good, should take steps to prevent the continued spread of tuberculosis among the negroes. If our cooks, nurses and other servants have the disease there is danger of our families becoming infected. Incidentally, I will mention that I do not believe that tuberculosis is decreasing among the whites of the South, and whatever steps are taken to lessen the prevalence of the disease should apply equally to the whites and negroes.

The methods to pursue in limiting an infectious disease like tuberculosis should be directed toward (*a*) increasing the strength and vitality of the individuals of the race, thereby rendering their tissues an unsuitable soil for the invasion and propagation of the specific germs of the disease, and in (*b*) preventing his exposure to the infective agent, as by the isolation of those already afflicted, and by destroying the organisms causing the disease.

The first proposition presented is the development and upbuilding of the minds, morals and bodies of a "child race," an alien people, placed under conditions and environments which would seem to be unfavorable to the growth and stability of the race, and wholly unlike those under which his ancestors had lived for centuries. In a paper like this I can only discuss this phase of the question briefly, but those who are interested I would strongly urge to read "The Race Tendencies and Traits of the American Negro," by F. L. Hoffman, the able statistician of the Prudential Insurance Co. of America. He has collected and published in this book, at an enormous expenditure of time and energy, the largest and most valuable statistics bearing on all phases of the negro question that I know of in all the literature on the subject. He has applied statistical methods in forming his deductions, and, being a German by birth, and, therefore, free from the so-called race prejudice, his conclusions are of great value, and the facts and figures which he has presented can hardly be questioned.

Much may be done to develop the negro through education applied on the right lines. He has every opportunity in the South that the whites have of obtaining both a common-school and collegiate education, but the moral, physical and hygienic education of the race is almost wholly neglected. By educating the children in these matters they would instruct their parents on the hygiene of their persons and their homes. Their school buildings should be inspected by the health officers in every county and should be kept in a sanitary condition. Regular physical exercises, directed especially toward developing their lungs and the accessory muscles of respiration, should be a part of the daily routine of school duties. The children should be taught the importance of taking frequent and regular baths; that filth means disease, and cleanliness should be required of them. They should be shown the direful effects of immorality on their bodies as well as their souls. A higher standard of morals and education in their ministry and among their teachers would help much in this direction.

Regular daily lessons and talks on practical hygiene should be a part of the curriculum of every school. They should be taught how to live in their homes; that there "cleanliness is next to godliness"; that fresh air and sunlight are among the great boons to humanity, and if they would have health they must have plenty of both in their homes. They should be shown the dangers of overcrowding; that health can not be maintained when more than two or three sleep in the average-sized room; that there is danger in sleeping in the room with any sick person, especially one with a cough. They should be doubly impressed with the danger of spitting on the floors, walls, or any place where the sputum can dry and dust particles get into the atmosphere; that the germs of consumption, which disease, the youngest of them know, is the cause of many deaths of their relatives and friends, is carried through the atmosphere and breathed into their lungs, and that the dried sputum is practically the only source of infection. They should be instructed in the hygienic management of a case of tuberculosis; that there is danger in even a casual association with a consumptive who is careless in his habits of spitting, but that there is little danger of contracting the disease even by close association with a person who has consumption, and who is cleanly in his person and at his home, and who is careful to expectorate into vessels containing dilute solutions of an antiseptic fluid, or into spit cups, which are burned before the sputum has time to dry.

They should also be taught that health and happiness come from regularity of habits and work, diet, recreation and sleep, and that a liberal quantity of all are required to keep in perfect health. Above all, they should be taught the manliness and honor of physical labor, and that their education fits them for their life's work, and not for a life of ease and luxury; that there is as much honor in farming as in teaching or preaching.

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[5] Transactions of the American Surgical Association, vol. 14, p. 523.

> coming from foreign ports, or ports within the United States, from landing passengers and goods, prescribe the places and time for vessels to quarantine, and impose penalties on persons for violating the same; and . . . . such laws, though affecting commerce in its transit, are not regulations of commerce. . . . .

Feb. 25, 1799, Congress passed the following act:

> The quarantine and other restraints established by the health laws of any state, respecting any vessel arriving in or bound to any port or district thereof, shall be duly observed by the officers of the customs revenue of the United States, by the masters and crews of the several revenue cutters, and by the military officers commanding any port or station on the sea coast; and all such officers of the United States shall faithfully aid in the execution of such quarantine and health laws, according to their respective powers, and within their respective precincts, and as they shall be directed from time to time by the Secretary of the Treasury.

The above extracts from decisions of the Supreme Court of the United States, to which many others of similar tenor might have been added, seem to prove beyond controversy that public health powers belong wholly to the states.

While regarding this principle as thoroughly established, the writer stands on record as having repeatedly expressed the opinion that certain public health powers should be conferred on the general government, the nature and scope of which will be discussed later on in this paper. It would seem that such a grant of power could not be conferred in any other way than by an amendment to the constitution.

We are now prepared to enter on the consideration of the second division of our theme, namely, how shall public health powers be exercised, or, in other words, how shall a public health system suited to our form of government be formulated and executed?

Ranking the public health system of a country as quite equal, if not superior, in importance to that of a judicial or military system, the answer to the question just propounded is worthy of close and critical study.

A categorical statement of the cardinal principles that should be embodied in a public health system for this country may be made as follows:

1. The system should conform closely to the spirit and genius of our government.
2. It should, as far as possible, recognize and respect the principles of local responsibility and of local self-government.
3. It should be co-extensive with the country, and susceptible of immediate enforcement whenever and wherever needed.
4. It should be based on a uniform, coherent and complete organization of the medical profession of the entire country.
5. Boards and bureaus of health should be composed of physicians only, and eligibility for positions in such bodies should depend on membership in the organized medical profession.
6. All medical health officials should be elected by the organized medical profession of the territory or district over which their several jurisdictions extend. All non-medical officials should receive appointment, either directly or indirectly, from the same source.
7. The system should be widely divorced from politics, and should be wholly independent of commercial influence.
8. It should be substantially uniform for municipalities, counties and states.
9. The first function of the system should be advisory; the final one, executive.
10. Economy of administration should be a distinguishing feature of the system.

Should any of these propositions be deemed vulnerable or impracticable, attack on them is invited, as the writer flatters himself they are susceptible of easy and successful defense. Before proceeding further, however, it might not be amiss to briefly comment on some of the propositions.

The first proposition affirms a truth the value of which can not be overestimated. The public health system of a monarchy and that of a democracy must, in some respects, radically differ. In a monarchy, the power needed to operate the system must be drawn from the king or ruler, and all health officials must receive their appointments from, and be responsible to, the same source; while in a democracy the power to operate the system must, in the last analysis, be drawn from the people; and all health officials—medical and non-medical—must, either directly or indirectly, be responsible to the people. That is, the public health systems of these two forms of government must be supplied with vitality and power from two opposite poles or sources.

The same principle applies, *mutatis mutandis,* to all modifications of these two forms of government.

If in the construction of a public health system this principle be violated, either tyranny, on the one hand, or anarchy, on the other, will, sooner or later, terminate the life of a system that fatally transgresses a fundamental law of jurisprudence. We may just as well transplant a tree by placing its branches in the soil and its roots in the air and expect it to grow and flourish and bear fruit as to expect that a public health system constructed to suit a monarchy will permanently live and prosper in this country. Should such a system become a permanent institution in this government it will be because the people have abandoned the faith of their fathers and turned their backs on the blood and treasure spilt and spent in purchasing rights they prized more than life itself.

The second proposition follows naturally and logically on the first, and simply reaffirms the doctrine of local self-government, a doctrine that has been so inbred in the blood and bone of our body politic as to become an integral part of its organic life.

The third proposition will be accepted on its mere statement.

The fourth will also, I hope, as it stands with relation to some of the propositions that follow as premise to corollary.

The soundness of the fifth and sixth propositions will not, I presume, be questioned by a body of medical men, but their practicability may be. An argument on this point will be offered a little later.

The seventh, eighth and tenth propositions will, I feel confident, be accepted without argument.

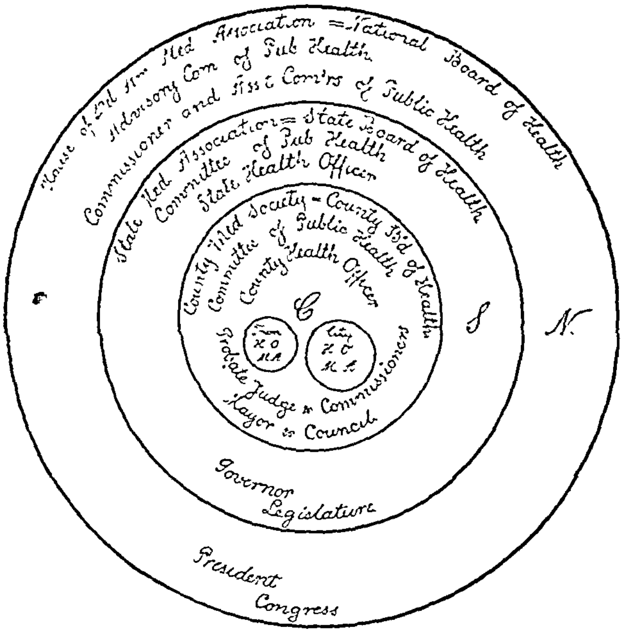
The ninth proposition may need some explanation. This will be given in another and more appropriate connection.

An effort will now be made to apply the principles just enunciated to the hypothetical construction of a public health system for this country, and in so doing use will be made of a diagram, with the hope that thereby the work of construction can be both shortened and rendered more complete and perspicuous. The same unit of construction will be adopted as that generally agreed on for the organization of the medical profession of the country, namely, the county.

The first problem, therefore, to be solved is to formulate a public health system for a county that will be susceptible of application to all counties, wherever situated. Let the inner or smaller of the three concentric circles in the diagram (in the center of which is the letter C) represent the territory of a county, within which are two smaller circles, one representing an incorporated city, the other, an incorporated town. Within the circle C and within the smaller circles are enumerated, respectively, the authorities that should co-operate in the protection of the health of the people of a county and of all incorporated cities and towns therein.

For the county, it will be seen that these authorities are given as follows:

1. A county medical society, to membership in which all reputable and licensed physicians in the county, including those in incorporated cities and towns, should be eligible.
2. A committee of public health, composed of from five to ten of the most experienced and trustworthy members of the county medical society.
3. A county health officer, with an assistant for each beat, or for two or more beats, according to the size and population of the beats.


House of Del Am Med Association = National Board of Health
Advisory Com of Pub Health
Commissioner and Asst Com'rs of Public Health
State Med Association = State Board of Health
Committee of Pub Health
State Health Officer
County Med Society = County Bd of Health
Committee of Public Health
County Health Officer
C
Town H O M A
City H O M A
Probate Judge & Commissioners
Mayor & Council
S
N
Governor
Legislature
President
Congress

4. County authorities, that is, the probate judge and commissioners, or officials corresponding thereto.

For incorporated cities and towns the authorities are indicated on the diagram as follows:

1. City health officer (City H. O.).
2. Town health officer (Town H. O.).
3. Municipal authorities (M. A.).

A little analysis will show the wisdom of an arrangement of authorities such as that proposed, and also of the partition of power that will be made among them.

The organization of a county medical society, composed of the legal and reputable physicians of the county, is a basic principle of construction that must be laid in order to build up a public health system best adapted to our form of government.

Such an organization, aside from being the logical bedrock of the system, would materially promote the advancement of scientific and practical medicine, and by rapidly disseminating among the members the well-digested results of research and experience would render them more skillful and resourceful than they would otherwise be when called on to do battle against disease.

The county medical society should be by law constituted the board of health of the county, and in that capacity should be made the legal adviser of county and municipal authorities on all sanitary and public health questions, subject, however, to such supervision by the state board of health as might be provided for by law. Endowment with such advisory power would naturally stimulate the members of the county board of health to devote more or less special study and attention to sanitary and public health problems, and thus to better equip themselves for the responsible position accorded them.

Further, the meeting-hall of the board would furnish the best possible field for the discussion of all public health questions that might arise, and whatever conclusions might be reached each member would be disposed to accept them in good faith as the judgment of a majority of the members, rendered after full and fair discussion.

Without such a court of last resort differences of opinion as to the best methods of procedure would be continually arising, and in danger of disturbing the harmony, if not of destroying the perpetuity, of the system.

To endow a few physicians of a county with plenary public health powers, without allowing their colleagues any voice whatever in the discussion or direction of public health policies to be pursued under critical conditions, would inevitably lead to discord and disruption and possibly at times to unwise and injudicious action.

In times of peril or pestilence the combined sanitary wisdom of all of the members of the county board of health should be made available, which can not be done in any other way than by making the county medical society the county board of health.

Such a body could, in its regular meetings, discuss broad sanitary questions and indicate general lines of policy to be pursued under varying conditions, but, obviously, a county board of health thus constituted would be too large and unwieldy to meet emergencies, hence the necessity for the second one of the county health powers mentioned above, namely, a committee of public health.

As already stated, such a committee should be composed of from five to ten of the wisest and most experienced members of the county board of health. While large discretionary powers should be delegated to such a committee, it should be required to report its action from time to time to the parent body, when, after thorough review and discussion, such action could be either approved or disapproved. Such a committee would soon become trained in its work and could be very safely trusted to act for the best interests of all concerned.

Next in the list of authorities come the executive officers; that is, a county health officer, with assistants, for the county, and city and town health officers for the incorporated cities and towns.

While the general duties of these officers should be definitely fixed by law, yet in the performance of those duties they should be subject to the guidance and control of the committee of public health.

Lastly, the scope of authority of the county and municipal powers must be fixed, namely, that of the probate judge and commissioners and of the mayor and councilmen. These officials are supposed to be laymen, and, although unacquainted with disease and sanitary science, they must play an important part in executing a public health system suited to a democracy.

They are the legal custodians, respectively, of the treasuries of the counties and of any incorporated cities and towns therein. To them only should belong the right of appropriating the people's money for public health purposes, except such sums as may have been by law specifically set aside for definite purposes and placed at the disposal of the medical health officials. The county and municipal authorities, being elected by, and, therefore, responsible to, the people, should properly be held accountable for the wise and judicious expenditure of the people's money for public health purposes, as for all other purposes. For violation of this obligation the people could punish said officials by displacing them from office, a check that could not under the proposed system be applied to the medical health officials, they being elected by the organized bodies of the medical profession, and not by the people.

As a public health system can not be executed without money, these county and municipal authorities must, from the treasuries they respectively control, furnish this indispensable lever; hence, as said, they occupy a very important relation with respect to the enforcement of a public health system.

According to the system thus briefly sketched for a county, it will be seen that the advisory and executive health officials, county, city and town, are to be physicians and representatives of the organized medical profession of the county, and that in the application of the teachings of sanitary science to the prevention of diseases they shall avail themselves of the resources of practically all the physicians of the county; that is, the medical health officials would be expected to furnish the expert knowledge necessary to execute a public health system for a county; while the county and municipal authorities would be expected to furnish the money necessary to execute such a system.

When the expenditure of money has been authorized by the county or municipal authorities, as the case may be, to the corresponding medical health officials should be accorded the right of directing the mode of expenditure. If expert knowledge is needed to point out what should be done to protect the public health, the same kind of knowledge is needed to direct how it should be done, else the expenditure of money for such purpose would often be injudicious and wasteful.

In the practical enforcement of the proposed system in a county, including incorporated cities and towns therein, the consecutive steps to be pursued by the coordinate authorities may be stated as follows:

1. The medical health officials of the county, or of the municipality, as the case may be, would advise what should be done.
2. The county and municipal authorities would decide as to whether or not money should be expended.
3. If money is to be expended the medical health officials would supervise the mode of expenditure; that is, the first function of said officials would be advisory, the final one executive.

A little reflection will show the wisdom of such division of authority and of such partition of power.

The members of the medical profession of a county are unquestionably more competent than others to judge of the personal and professional fitness of one another for filling public health positions; hence to no other electors could the selection of expert advisers be so safely and wisely entrusted as to the organized medical profession of the county.

For even stronger reasons the people should exercise the right of selecting the guardians of their treasuries. These guardians, although not physicians, are usually intelligent men, and, therefore, fully capable of deciding on the wisdom or not of expending money for public health purposes, when the reasons therefor are laid before them by physicians in whose knowledge of sanitary affairs and in whose interest in the welfare of the community they repose entire confidence.

Were medical health officials, elected in the way proposed, permitted to expend money for public health purposes (except definite sums set aside for specific uses) without the endorsement of officials elected by, and responsible to, the people, very soon the cry of unwise and lavish expenditures, however unfounded they might be, would overthrow and utterly destroy such a system.

The only way, therefore, of achieving the best results is to so frame a public health system as to place the selection of the medical officials in the hands of those most competent to name them, and at the same time to leave to the people, acting through the custodians of their treasuries, the right to decide whether or not they will provide the means for operating the system.

Objection might be offered to a system that is made dependent on such a contingency, but the answer is easy. If the people will not provide the means for operating a public health system they will not enact a law making it mandatory on the custodians of their treasuries to provide the means; hence either alternative leads at last to the same test—the will of the people. But if a public health system be provided that works promptly, efficiently and economically, the people will give it their warm support, and such a contingency as that mentioned will not be apt to happen. However, should it occur through antagonism on the part of incumbent county or municipal authorities, popular clamor could soon bring the offending authorities to terms, and at the next election such officials could be retired from office. Any difficulty that might arise in this way would be infinitely less than would result from any other system that can be devised.

We are now prepared to enlarge the system so as to make it comprehend a state.

Let the next larger circle in the diagram, marked S, represent the territory of a state. In that circle are enumerated the powers that should enact and enforce public health laws for the state, to-wit:

1. A state medical association, which should be by law constituted the state board of health.
2. A state committee of public health, composed of ten or more members elected by the state board of health.
3. A state health officer, elected by the state board of health.
4. The governor, as the state executive officer.
5. The legislature, as the law-making power.

The arguments advanced in support of a similar division of public health authorities for a county apply with even more force to the above division of state authorities, and, therefore, need not be repeated here in detail. Some explanation, however, may not be out of place.

The state medical association, hereafter to be called the state board of health, should consist of an organic union of the county boards of health; that is, membership in a county board of health should, *ipso facto*, carry with it membership in the state board of health, conferring the right to attend all meetings, to introduce new measures, to participate in discussions, etc. The voting privilege, however, should be so regulated as to give to each county board of health its due share of strength.

A state board of health thus organized would furnish the medical men of the state a forum for the discussion of public health questions and a tribunal for their settlement—so far as they are concerned—that would tend more than all else to cement the profession together, and to promote that harmony and unity of action without which a thoroughly efficient public health system suited to our form of government can not be maintained.

A state board of health organized as indicated above would for a stronger reason than that applied to a county board be too large and unwieldy to act quickly, or to meet sudden demands, hence the absolute necessity for the existence of the two next authorities mentioned above, namely, an advisory committee of public health and a state health officer. Both of these should be elected by, should act for, and should be responsible to, the parent body—the state board of health.

The state health officer should be clothed with executive authority, but should receive counsel and help from the advisory committee whenever he applies for it, or whenever the committee chooses to give it to him.

The relations between the several state officials should correspond with those outlined for county officials; that is, the function of the medical health officials should be to furnish the advisory and executive skill necessary to enforce a public health system, and that of the governor should be to authorize the expenditure of money for such enforcement, whenever in his judgment the facts represented and the recommendations submitted seem to justify such expenditure.

The function of the legislative authority should, of course, be to enact a code of sanitary laws for the state, in doing which it should freely avail itself of counsel from the state board of health.

Lastly, it remains to see how naturally and logically the system applied to counties and states can be applied to the nation, and made to comprehend certain well-defined public health powers.

Let the largest of the three circles in the diagram, marked N, represent the territory of the nation. Within that circle the following arrangement of health powers is proposed:

1. The House of Delegates of the American Medical Association as a national board of health, to which the health officer of each state should be one of the annual delegates from his state.
2. A commissioner of public health and two or more assistant commissioners, elected by the House of Delegates.
3. An advisory committee of public health consisting of the health officers of the several states.
4. The president, as a national executive officer.
5. Congress, as the national legislative power.

In order to determine what public health powers should be conferred on the national authorities just enumerated, let us assume that every incorporated city and town in the United States does all it should do for the protection of the health of its people; that every county in the United States likewise does all it should do; and, finally, that every state does all it should do, obviously, what remains undone, and what could be better done by all the states working together than by each state working separately, will then become clearly apparent.

Public health powers falling in either one of these categories should be delegated to the national authorities. A little analysis will show what these powers are.

In the first category, or what would remain wholly unprovided for, one function only can be mentioned. That function would be:

To provide an appellate tribunal for the adjudication of any conflicts that might arise between state boards.

In the second category, or what could be better done by all the states working together than by each state working separately, several functions may be mentioned:

1. To adjust the public health relations of this country with foreign countries, under which head would fall the ascertainment of the health conditions prevailing in said countries, maritime quarantine and disinfection, and the examination of immigrants to ascertain their fitness for admission.
2. To supervise interstate quarantine.
3. To determine what infectious and contagious diseases should be controlled by law, and to fix the periods of incubation of such diseases, thus establishing uniformity in these matters among the states.
4. To establish uniform tables of nosology, and to regulate the forms according to which vital and mortuary statistics should be collected by the states.
5. To provide for the inspection of foods and drugs.
6. To exercise supervision over the pollution of streams flowing from one state into another state.
7. To adopt uniform rules governing the transportation of the bodies of deceased persons from one state to another state.
8. To establish on a broad scale a laboratory for the study of the causation, course, pathology and prevention of diseases.

Under such grants of power the national officials should exercise their authority according to the same principle as that laid down for county and state officials; that is, the medical officials elected by the American Medical Association would furnish the expert knowledge and executive supervision necessary for national public health purposes, and the officials elected by the people—the president and Congress—would authorize the expenditure of money for such purposes.

Objection might be alleged against this principle of procedure on the ground that the time consumed for interviews and correspondence between the medical officials, on the one hand, and the corresponding municipal, county, state and national authorities, on the other, before action could be taken, would render the system inadequate for meeting emergencies. Such, however, need not be the case.

A city or county health officer could communicate very quickly with the officials whose coöperation would be needed; a state health officer would be required to consult the governor only, and the national commissioner, the president. Beside, great and pressing emergencies are not very frequent, and in the event of their occurrence provision could be made for permitting medical officials to incur necessary expense in meeting them until such time as all formalities could be complied with.

The coöperation among officials, from a municipality up to the nation, which the system demands, would very soon establish such mutual confidence as to guarantee the utmost harmony on all occasions.

SUMMARY.

The views expressed in this paper may be briefly summarized as follows:

1. Public health powers reside in the states.
2. Counties and municipalities derive all public health powers they exercise from their respective states, and, therefore, are subject to supervision, and, in the last analysis, to absolute control by said states.
3. For the common good, certain public health powers, already enumerated, should be conceded by the states to the nation, provided that the states are allowed

representation in selecting the executive officer who is to exercise these powers, and also representation on the advisory committee for such officer.

4. The selection of all advisory and executive health officials—county, state and national—should be delegated to the organized medical profession of these divisions of government, respectively.

5. Municipal, county, state and national officials, who have been elected by the people, respectively, must control the expenditure of money for public health purposes, except such sums as have been legally appropriated for specific purposes and placed at the disposal of the medical officials.

6. Each division of government, that is, each municipality, county, state and the nation, should provide the funds for executing public health measures ordered by its officials.

By agreement, however, the nation, a state and a county, or municipality, might concentrate their skill and money on any point at which a great menace to the public health exists.

Thus might be formulated and operated a homogeneous, logical and coherent public health system for this country—one whose foundations would be deeply laid in the soil of every county of the United States, whose superstructure would embrace the harmonious systems of all the states, and whose dome would culminate in a crown of conceded and beneficent national authority.

Think of the possibilities of such a system! Aside from securing the removal of unsanitary conditions, the collection of vital and mortuary statistics, the prevention or suppression of outbreaks of infectious diseases, reports on the topography and climatology of every county in the United States, the system could provide for a close and critical study of the domestic, sanitary, industrial, educational and racial conditions existing in every precinct—yea, every household—of the country.

From such data, the statistologist, demographist and sanitarian could evolve truths and principles easily susceptible of being applied to the elevation of the material, physical, mental and moral welfare of the people. Indeed, no better force than the public health officials of a county under the proposed system could be provided for taking the census at the decade periods, they being better acquainted with the people and with existing conditions than any appointees that could be named.

It goes without saying that the medical men of the counties, of the states and of the nation, true to the traditions of the profession, would offer to contribute, "without money and without price," their advisory skill toward the building up of such a system. For the executive health officials only, a large part or all of whose time would be occupied, need remuneration be provided. This should be done by the civil divisions corresponding with their respective jurisdictions.

In view of the "eternal fitness of things" and of the immense, valuable and unrequited services that would be rendered by the great body of the profession in executing such a system, the demand that boards and bureaus of health should consist of medical men only would certainly be deemed both modest and just.

That the proposed system can be built up does not admit of a doubt. If the medical men in every state will resolve that it shall be done, and will then proceed to educate the people in the merits of the system, the end will unquestionably be achieved.

DISCUSSION.

Dr. H. A. Moody, Mobile, Ala.—Every citizen likes to feel that whatever may be the governmental arrangements above him he has some *means of controlling* them, some way of correcting errors and some way of punishing any faults or acts on the part of the officers in charge, should they be contrary to the laws of the country or to the public good. It seems to me that any system which controls the health of a city or a state or a nation ought to be controlled by the citizens of that city, state or nation, and not by any one individual. I am very glad to be able to say that to-day we are under the charge, so to speak, of a gentleman against whom no one can say a word. He is a good man and a good officer, and everybody likes him; so no one can attribute to him, personally, any criticism we may make of the system itself. But we must look to the future as well as the present, and the day may come when we should regret very much that it is impossible for us to change a health officer located in any city or state, no matter how obnoxious he may be, or however he may neglect his duty. Here will be a man in control of our health affairs who is entirely unsatisfactory to us in every way, and yet we will not be able to help ourselves. I say, I am glad to refer to this matter now when conditions are so satisfactory, in order to call attention to our plight if at any time conditions should change for the worse.

A few days ago I met a gentleman from one of the Gulf states, who expressed himself as satisfied with the turning over of quarantine matters to the Marine-Hospital Service. I asked him how he would like to have foreign officers in control of the police of his state. "Oh," he said, "the doctor has appointed all of our old officers, and so it is all right." That is the way it is. If they will appoint officers who are familiar with and satisfactory to the people, and who know all the requirements of the neighborhood, it is all right. But a day may come when some one else will be in charge, and he may appoint officials who are obnoxious to the people, so much so that it may almost raise a riot in some of our states if they are placed under the control of such an agent.

So I think it not only desirable but necessary for this Association to study the subject and see if we can not have it arranged on a republican basis, and not on the basis of a dictatorship, as seems to be the case at present.

I am not sufficiently informed in quarantine matters to discuss other points raised by the paper and which struck me very forcibly; but, like every other American citizen, I want to have a voice in the appointment of the officers over me. At present I have no voice whatever, and it is only because the gentleman in charge is so acceptable personally, and so thoroughly in sympathy with us, that the system is satisfactory; but when the satisfactoriness of any system depends on the personality of the officer at the head of it, it is not a good system to live under.

Dr. R. D. Murray, Key West, Fla.—I do not speak as a government officer, but as a "locked-in" man. I sympathize with those people who do not like to have officials forced on them, but I am sure I never went into a place that I did not leave it full of friends. I do not believe a locally acquainted man is always a proper man to control an epidemic. As to the head of the service being fit or unfit, you must remember that he is under the control of a civil officer of this government, who is appointed by the President and confirmed by the Senate, and you can reach him, if you want to, very readily.

Wherever I have been I am proud to say I have left the places full of friends of Murray. On the whole, I think it is better for a foreigner to come down and help people in distress than for a local man to be placed in charge. The local men, as a rule, have too many animosities, belong to too many churches, or have been black-balled in too many clubs. And you know the women cut a figure, gentlemen, at times.

Dr. H. D. Holton, Brattleboro, Vt.—We have all given expression, especially in the American Public Health Association, to the necessity for a school for health officers, where all who are called to administer the sanitary affairs of a community could have an especial preparation for such duties. It would seem wiser that the health organizations of the Nation, state or municipality should be under the control of trained sanitarians rather than that of the National, state or local medical organization composed of medical men who have received little, if any, special sanitary training. At the present time the medical men who have the sanitary affairs of states in their keeping are medical men who have acquired what sanitary knowledge they have since their graduation. The great difference in duties imposed on county officials by the constitutions and laws of the different states would make it impractical to have the sanitary affairs of a county administered by the officers of counties in some of the states.

I am in accord with the gentleman from Florida that better and more satisfactory work is accomplished with less friction by having a general officer outside of a particular locality pay an official visit to that particular bailiwick and direct the work. He is free from the prejudices and the fascinations to which the gentleman alluded, and he can and does do his duty without fear or favor.

Regarding a National health organization having any power in the sanitary work of a state, or any interstate authority, I should say that we all recognize that all power conferred on health officials is a police power. Congress and the National executive have the right to regulate interstate commerce, which is not only the interchange of commodities, but also of personal intercourse of the inhabitants of one state with those of another; therefore, if persons affected with any communicable disease in a given state attempts to exercise that part of interstate commerce which consists in personal business intercourse with persons or the transporting of infected goods into another state, it is clear to my mind that National authority has the right to say on what conditions and under what restrictions these transactions shall be conducted. May I ask the author of the paper in his final summing up to make plain the principle of a National health department which should be organized without this power?

Dr. J. M. Lindsay, Havana, Cuba—I will start out by saying that I have no bouquets to throw, and have no knife up my sleeve for any one. I have been working for six months, leaving Havana for the purpose, to see whether we could not get the same quarantine regulations in all the ports of the Gulf. I first came to the American Public Health Association, and got them to endorse a paper I was taking around on an educational tour of the south. The majority agreed with me. (I found only one or two who refused to sign the paper.) I assert that quarantine should be under only one head, but to-day we have it under two. We have it under the U. S. Public Health and Marine-Hospital Service and we have it under the trust known as the Galveston Conference, which we can not get at to save our lives, though we can get at the Marine-Hospital Service. That is under the government, and they do not dare not to answer any letter we write. If they did, we know how to get an answer—through our senator. I have a friend from my district who can always get my letters answered if I can not. I want to say, however, in this connection, that so far all my communications to the department have been answered.

Now, as to the different states: After leaving Florida we come to Dr. Sander's own state. We find there a peculiar condition. The state has nothing to do with the matter. A board is appointed; composed of physicians? No; part physicians and part commercial men, but controlled and run by two people.

I visited that state and asked them to give us the same quarantine regulations at Mobile that we had at Pensacola, Fla., and at Gulfport, Miss. They said: "It is a bitter pill to swallow. Florida and Mississippi are open, but we are tied down by that Galveston Conference and can not do anything. Beside, we do not know what Dr. Sanders, who has charge of all the counties outside of Mobile, will do." There is your condition in Alabama.

I next came to Louisiana, and I asked them to let me come before them and discuss the matter, so as to get them in line with the U. S. Public Health and Marine-Hospital Service, and give us the same regulations as in Mississippi and Florida. They said they could not call a meeting of the board to hear any such proposition, but at the next meeting, which would be at some time in the near future, or in four or five months, they would take the matter up. While I was in Chicago on business, I received a dispatch that they were going to call a meeting, but I could not get there in time.

One of the things I wanted them to do was to use the Marine-Hospital inspectors in those tropical ports where the United States had placed such officials, and not to appoint a man from Louisiana; because it was really not under the police power, and they had no right to collect $200 to pay these men in foreign ports. They would not agree to that. Then I asked them if they could not call a meeting of that conference and break loose from it, because I believed there was no law giving to Louisiana, Alabama and Texas the right to form a trust. I believe in state rights, but when the states seek to give up those rights to a trust, then I believe we had better go under a trust that we can reach through our senators and representatives, and not a trust that we can not touch at all. I believe to-day, instead of fighting fifteen or twenty years to form a new organization, we had better fall in line with the U. S. Public Health and Marine-Hospital Service and get them, as far as possible, to take charge of the entire matter, give us scientific laws, and not be afraid that the south will not support them, because the south will support any scientific quarantine regulations. They say they can not do anything because the people of the south are not educated on the subject. Well, I find that they are educated, and where they are at all deficient it is the fault of the men who know all about it, but who refuse to go out and explain, but seek, on the other hand, to retard the movement in every way.

We have not had a case of yellow fever in two years; still, this port and those of Alabama and Texas have decided that every piece of baggage, every passenger (I believe they use bichlorid of mercury; which is what we used to do when we were looking for fomites) must be disinfected at the port of departure and again at the port of entry. And they will never assume any of the responsibility, but will always try to put it on some one else.

Some six months ago I happened to be in Nashville, and I said to a friend of mine up there: "Judge, you have been losing golden opportunities in the south because of quarantine regulations. I am trying to get the people to give us better regulations in this regard, so we can get the trade of forty millions of people, and I believe it is time the people of the north took charge down there. These are Gulf ports simply because they happen to be on the Gulf geographically, but as a matter of fact they are the ports of the entire nation, and the forty million people in the north have a right to tell these men that they are entitled to protect themselves so far as their health is concerned, but they have no right to make every ship that comes in pay a bonus to get into American ports." He said: "Well, you are going to try to wake them up?" I said: "Yes, sir; that's what I am going to try to do." He said: "Well, I feel sorry for you." "Why?" "Because they will declare it unconstitutional. We in the south declare everything unconstitutional. We have had the shell long enough, and it is time now to change around, because we want the oyster."

To get into Florida and Mississippi costs nothing. To get into Alabama or Louisiana the ship must be disinfected at its expense. Now, I say that when they tell a ship, "You can not do business in this port unless you contribute so much a month to the pay of our inspectors," they go beyond their police powers and enter the National province. They should not be allowed to take that subsidy from the ships, and the sooner we get a new system the better—not such a one as Dr. Sanders proposes, because I tell you when you go up against that you won't have any regulations at all. I know if I had my choice to go up against the Marine Hospital or that trust, known as the Sanders' trust, I would take my chances with the United States every time.

Dr. W. H. Sanders, Montgomery, Ala.—The gentleman who has just taken his seat has indulged in details and personalities that had no connection whatever with my paper. He has set up his opinion on great constitutional questions against the consecutive opinions pronounced by the Supreme Court of the United States since its foundation by the government down to the present time; he has talked about state rights and trusts and has connected me with what he calls the "Sanders' Trust." I decline the prominence he gives me as being at the head of a monopoly. I am simply the executive officer of the organized physicians of Alabama, selected by them, and I am removable by them at will.

Dr. J. M. Lindsay—I had reference to this trust which you are trying to form.

Dr. Sanders—I have simply proposed a scheme for forming and conducting a democratic system of public health, not one under a single man or a single corporation. The gentleman speaks of the "Galveston trust." I do not know anything of that, and therefore can say nothing of it. Without going into the details he injected into his remarks, and which have nothing whatever to do with the matter under discussion, I will remind him that the first division of the question under discussion is: Where, under our form of government, do public health powers reside?

I attempted to show, and believe I did show, by decisions of the Supreme Court, that they reside in the state governments and not in the general government.

Dr. Lindsay—Have they the right, under the police power, to place a man outside, as they do, to work in the foreign countries?

Dr. Sanders—By consent of those countries. The general government can not put a man there without consent.

Dr. Lindsay—I mean to hold up ships and make them pay; is that police power?

Dr. Sanders—When a ship arrives at the borders of a state the state can deal with it, under her police powers, as she thinks proper.

Dr. Lindsay—When she gets to that state?

Dr. Sanders—Yes, sir.

Dr. Lindsay—Not before?

Dr. Sanders—No, sir; neither can the general government nor the Marine-Hospital Service acting for it. If Cuba, for instance, allows the general government or the state of Alabama to place representatives in Havana to disinfect ships, it is merely a permission and not a right at all.

Now, Mr. Chairman, many positions have been taken that should be answered. Should all public health powers be concentrated in one service, the Marine-Hospital Service, for instance, then all diagnostic power must be conceded to the same service. The officials of that service must do our diagnosing for us. I undertake to say that within the past few years distinguished representatives of the Marine-Hospital Service have made conspicuous errors in diagnosis. If we surrender the public health power now possessed by the states we must also surrender the right to say whether an infectious disease is present or not. In 1897 a fever began to prevail on the Mississippi coast. A number of medical gentlemen, I among them, went there, and after a prolonged investigation decided the prevailing sickness to be yellow fever. The chief of the Marine-Hospital Service selected an ex-official of his service, one who had served in it a number of years, a Cuban by birth, who had grown up with yellow fever, and had attained sufficient prominence in the profession of this country to be filling the chair of pathology in the University of Pennsylvania (I allude to Dr. Guiteras), and sent him down to the Gulf coast to investigate and report. Dr. Guiteras examined into the disease and declared, despite the opinion already announced, that the disease was not yellow fever. I would have conceded in advance that no better man than Guiteras could have been chosen for the work. On a certain Monday morning the announcement went out unanimously from the medical men on the ground that the disease was yellow fever. Dr. Guiteras arrived the following Wednesday, and on Friday telegraphed the chief of the Marine-Hospital Service: "I have examined 29 cases, 25 are dengue, 4 doubtful." Not very long after that Dr. Guiteras accepted the diagnosis that had been made before he reached the scene.

Since then I have seen other members of the service make mistakes in diagnosis. If you surrender the right to control these matters, I repeat, that you must also surrender the right to say whether any infectious disease exists that needs control. That is a dangerous power to concede.

I can not accept the proposition that it is better to have some one come from a distance to regulate these matters. I have had six years' experience as a public health official in my state, and it has been an active one. I should have said that this scheme I have inadequately explained is based on the public health system that has prevailed in Alabama for twenty-five years. It is no visionary scheme, and can easily be projected into a National bureau. Everything proposed inside of that state line (indicating on the diagram) has been in existence in Alabama for twenty-five years.

Dr. Lindsay—What about Mobile?

Dr. Sanders—About ten years ago a number of the commercial men of Mobile went to the legislature, then in session, and, as a very powerful lobby, secured the passage of a special law creating the Quarantining Board of Mobile Bay, which is out of harmony with our system. It would require considerable detail to explain how this was brought about. We are biding our time, and probably by waiting we will see the true system prevail again at Mobile.

With the exception of the Quarantine Board of Mobile Bay, not a commercial man has served on any Alabama board of health for twenty-five years. The members of such boards are physicians, and in no other way can these matters be taken out of politics. Boards of health should be composed of physicians, and health officials should be selected by the organized physicians of the locality over which such officials are to preside. In Alabama the state or county authorities can decline to act on our advice, but if they do the responsibility rests on them. Our authority is merely advisory in the beginning, but if the state or county authorities authorize the expenditure of money, then our authority becomes executive. That is to say, our authority is at first advisory, but if money be appropriated it becomes executive. We have found the system to work admirably for twenty-five years, and we are anxious to see it propagated to other states, and also projected into a National bureau of public health that will correspond to our democratic form of government, and not with a monarchy.

Dr. H. D. Holton, Brattleboro, Vt.—You said something about interference with interstate commerce. I don't quite understand that.

Dr. Sanders—If the counties do all they should to protect the health within their borders and the states all they should to protect it within their borders, nothing remains for the Nation to do but regulate interstate and foreign quarantine. That is all that remains undone for the Nation to do. It is constitutional for the National government to aid the states in the enforcement of public health laws. The National Bureau of Public Health that formerly existed was founded on that idea. The National government can aid any city or state in trying to control an epidemic, and can appropriate money for that purpose, and send a representative to aid in the struggle. Suppose an epidemic should appear in this city, and the Nation should send here a representative, a sanitarian fully equipped and competent to aid in dealing with the situation, and authorized to aid financially, do you doubt that the health officer of the city of New Orleans and the health officer of the state of Louisiana would accord to that representative of the Nation due consideration and to his opinions due weight?

Dr. Holton—Suppose the National health officer insisted on regulating things in his own way, would he have any right to do that?

Dr. Sanders—Under the scheme outlined three officials would be on the ground, the city, the state and the National officials, two of whom would be a majority and decide the policy to be pursued. To give the National representative absolute control would require an amendment to the constitution, and, in my opinion, would be very unwise.

Further, the expenses of a campaign against an outbreak of sickness could be equally divided between the city or county, as the case might be, the state and the National government. That would offer a premium on early and prompt action on the part of the county or city. The local officials would know that by acting promptly they would get the help of the state and of the Nation, which would stimulate them to promptness of action and not to ignore conditions under the idea that by shutting their eyes to them they could get rid of them.

Dr. Lindsay—Where is that ultimate advisory power? In the American Medical Association?

Dr. Sanders—Yes, sir; the American Medical Association should have advisory power for the Nation, for the President, and for Congress; advisory power in the first instance, and then, by suitable laws, it could be invested with certain executive power. Let the Nation be guided in public health matters by its sanitarians, its physicians. When advice from such a source should be laid fully before the Nation, as is done in the state of Alabama, the Nation could either accept or reject it; but if the Nation should act on such advice, then let the American Medical Association, through a National bureau of commissioners of public health, execute its own advice. That is the policy in Alabama.

Dr. Lindsay—That is democratic?

Dr. Sanders—Yes, sir.

Dr. Lindsay—For the Nation to give over this right to the American Medical Association?

Dr. Sanders—The Nation is competent to delegate authority to the American Medical Association, or to any class of men it chooses. I think that is a fundamental principle which can not be successfully controverted. The Nation is competent to delegate its power to any body of men; and if it chooses to delegate it to men selected by the American Medical Association, who can dispute the right?

Before taking my seat I will say that in 1897 yellow fever prevailed in several places in Alabama before its presence was discovered at Ocean Springs, Miss., its original seat. Since then not a case has occurred in Alabama, although the states alongside, Florida on the one side and Mississippi and Louisiana on the other, were overrun, more or less, with yellow fever in 1898, 1899, and, to some extent, in 1900. Not only so, Alabama protected her people and her commerce at a remarkably small cost. For three years the total expense of conducting the state quarantine in Alabama was in round numbers $20,000, and for two of those years the state was entirely protected. My information is that for the same three years Mississippi expended more than $100,000 and got no protection either year. The other states mentioned doubtless expended large sums for the same years and likewise were overrun with the fever. Is not that simple statement of fact a strong endorsement of the Alabama system?

The United States Public Health and Marine-Hospital Service seems to be gradually but certainly usurping the public health powers of the states, which the Supreme Court has said many times is unconstitutional. In addition to being unconstitutional, I believe such usurpation unwise and impracticable. The officials of that service acquire their positions by undergoing examination, and are not chosen either by the people or by their colleagues of the organized profession, consequently they sustain absolutely no representative relation either to the people or to the profession. The chief of that service, who dictates the public-health policy to be pursued by his service, need not be a member of any local medical organization or of this Association, and therefore is entirely independent of any advice or recommendations that might proceed from this body.

Here are assembled representative medical men from the states, and it seems a fair proposition that they should have a representative commissioner of public health of their own selection, through whom they could advise the Nation on public health questions, and whom they could displace from office on his refusal to obey their recommendations.

Venesection and Saline Infusion in Heatstroke.—It is reported by a contemporary that in two cases of heatstroke in Cincinnati twelve ounces of blood were withdrawn, and replaced by an equal amount of physiologic salt solution, with excellent results. Temperature was reduced, convulsions ceased, and the patients fell into refreshing sleep within an hour.—*Med. Age.*

ONE THOUSAND CASES IN STUDENTS' OUTDOOR OBSTETRIC PRACTICE.

REPORT OF FIRST SERIES IN THE OUTDOOR OBSTETRIC DEPARTMENT OF THE UNIVERSITY COLLEGE OF MEDICINE.

JOHN F. WINN, M.D.
Superintendent and Obstetrician-in-Charge of Obstetric Clinics; Lecturer on Obstetrics in University College of Medicine; Obstetrician to Virginia Hospital.
RICHMOND, VA.

I have the pleasure of submitting my report of the first series of 1,000 cases in the outdoor obstetric department of the University College of Medicine for the period of (nearly) eight years, ending Oct. 23, 1902. To be strictly accurate, a service of seventy-six months is represented, the two stations not being provided with regular attendants during four of the college vacations.

Of course, the average number of patients treated annually increases year by year, as the service becomes better known. As far as I know, this work is the first attempt on the part of any medical school in the southern states to conduct a systematic and regularly organized free service for lying-in women at their own homes. Each office or station is centrally located in a laboring district, and fitted up for the residence of three students who respond to obstetric calls only.

It is befitting to add that the successful results of the undertaking are to be attributed, in a large measure, to the hearty co-operation of the students and to their uniform courtesy and professional dignity in the performance of their duties.

The armamentarium of the attendants at each of these two obstetric stations consists of a leatherette telescope or satchel about twenty-two inches long, ten inches wide and eight inches deep, containing the following:[1]

Three agate wash basins.
Towels.
Green soap.
Hand brushes.
Scissors.
Linen bobbin tape.
Sterile gauze.
Absorbent cotton.
Bichlorid tablets.
Lysol.
Boric acid.
Chloroform.
Ergotol.
Fluid extract ergot.
Croton oil.
Strychnia tablets.
Chloral hydrate solution.
Fountain syringe.
Catheter.
Perineal pads.

SIMPLE TECHNIC.

With the unsanitary environments usually encountered, it must, of course, be remembered that anything approaching a complete aseptic technic is impossible; yet the greater necessity for cleanliness is impressed on the minds of the students, and all attendants constantly endeavor to observe, as rigidly as circumstances will admit, the principles of asepsis in reference to vaginal examinations. In doing this no claim is made for any great array of antiseptic or aseptic paraphernalia. On the contrary, the aim is to reduce everything to the simplest possible system of disinfection and asepsis. While the students are not limited as to the number of vaginal examinations, they are encouraged and advised to practice abdominal palpation in all cases if time permits, not only for verification of diagnosis, but for the purpose of reducing to a minimum the danger of infection by vaginal touch.

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[1] Students provide themselves with hypodermic syringes and clinical thermometers. The satchel is not furnished with forceps or other instruments, for the reason that all operations are performed by me; and if such instruments were so accessible, the temptation to use them in my absence might lead to disastrous results. The absence of instruments from the above list is thus explained. A valuable acquisition to this satchel will be found in the form of a large copper pan, like one I have been using for a long time in my private obstetric bag. Its dimensions will correspond with the inside of the telescope, and it will afford a more capacious and ready sterilizer in these homes, and will also serve a useful purpose when asphyxiated infants need to be placed in hot water.

Before making the antiseptic solutions the basins are prepared as follows: They are thoroughly scrubbed with soap and water. One basin is then made the container for boiling the brushes, scissors and tape. Another serves as a cover while the boiling is going on. Before this is completed the third basin is substituted for the second. When all have been sterilized, one basin is used for the bichlorid, another for lysol solution. The third serves as the wash basin. The hands and forearms of each attendant are scrubbed not less than five minutes with hot water and green soap, the water being changed at least once. After the hands have been immersed in bichlorid solution (1/1000) for five minutes, the inner surface of the patient's thighs and the whole of the external genitalia *as far as the introitus vaginæ receive the same soap and* hot water scrubbing with a soft brush or a gauze sponge, followed by a bichlorid bath. Over the vulva is now laid a pad of gauze or absorbent cotton wrung out of lysol solution (one teaspoonful to one pint).

The patient having been prepared, the hands are again scrubbed and immersed in bichlorid and, finally, in lysol solution before they are considered ready for vaginal touch. Vaselin is never employed as a lubricant. The examining finger is carried directly from the lysol solution into the vagina. The lysol has always proven to be a most efficient lubricant.

More than ordinary care is observed in the manner of making a vaginal examination. The patient is brought to the edge of the bed in the dorsal posture. All bed covering is turned back by an assistant, the genital organs being thus left in full view. While the knees are held apart by another, the labia are carefully and widely separated by the thumb and forefinger of one hand in such a manner that when the index and middle fingers of the other hand are introduced they come in contact with the walls of the vagina only. Just here I will state that the antepartum vaginal douche has never been used in this service. Observation and experience had convinced me that those cases in private practice which did not receive the douche always had a better puerperium than those which did; hence, without knowing why, and even before Krönig's announcement that there were no pus-producing bacteria in the vagina of a pregnant woman, vaginal douches were deemed unnecessary. The effort is made to keep the hands, and especially the examining hand, sterile, but, as a further safeguard against infection, the rule is to repeat the entire process of hand and genital disinfection in all its details every time a vaginal examination is made.

STATISTICAL SUMMARY.

As regards the statistical part of this report, there have been attended:

White cases	129
Colored cases	871
Total	1,000

Representing:

Full-term deliveries		893
Abortions, immature and premature deliveries		107
Vertex presentations		953
Breech presentations		38
Face presentations		2
Brow presentation		1
Shoulder presentations		6
Prolapsed hand		3
Prolapsed funis		3
Imprisoned placenta (not adherent)		14
Eclampsia		10
Postpartum hemorrhage		6
Placenta previa:		
At twenty-seventh week (marginal)	2	
At twenty-eighth week (central)	1	
At twenty-eighth week (partial)	3	
At thirty-eighth week (marginal)	1	7
Podalic version by internal method		11
Low forceps		18
Median forceps		4
High forceps with axis-traction (living child)		1
High forceps with axis-traction (asphyxiated child, died in a few hours)		1
High forceps with axis-traction (*dead-born* child)		2
Intra-uterine tamponade		2
Induction of labor at thirty-sixth week; rachitic pelvis (living child)		1
Curettement for inevitable abortion		5
Curettement for retained membranes		18
Perineorrhaphy		12
Extensive laceration of cervix above vaginal junction		1
Twin births		14
Ophthalmia neonatorum (no prophylactic treatment received)		2
Visits		4,421
Septic cases		4
Deaths from all causes		5

In studying the relation of morbidity and mortality to the number of cases, it must be borne in mind that the patients represented, for the most part, the extremely *destitute portion of the white and black population, and*, consequently, that the work was prosecuted amidst the most unfavorable and unhygienic surroundings.[2] The questions arise, why do not all of these people suffer from the worst forms of sepsis, and why is the death rate greatly lower than that recorded in private practice, and amid even ideal sanitary environments? I confess my inability to account fully for the immunity which this class of lying-in women possesses.

MORTALITY.

In view of the facts mentioned, it is gratifying to find that, out of the 1,000 cases, there have been but five deaths, and, since this portion of the report is significant and especially important, I have deemed it best to give the details connected with each case.

The first death, that of a colored multipara, occurred Aug. 10, 1898. I did not see this case myself, being engaged with a delivery in my private practice, but from the history given by the third-year student in attendance and confirmed by two of our then recent graduates, Dr. M. E. Nuckols and the late Dr. J. Travis Taylor, who saw the case at my request, the woman had had a postpartum hemorrhage. She had reacted well, however, and was believed to be out of danger; but, on attempting to walk across the room (supposedly for water) while alone for a few moments, she fell on the floor and died instantly. I do not like the term "heart failure," but if such is ever admissible, I think it would be quite appropriate for the cause of death in this case.

The second death resulted from eclampsia. A young colored primipara had traveled eighty miles by rail less than thirty-two hours preceding the outset of labor. This was two weeks before her expected confinement. The attendants at the Seventeenth-street station were summoned a short time before the birth of the child. Five hours after delivery they were called back on account of the first convulsion. I saw the case from this time on.

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[2] The following, one among many similar instances that might be cited, will serve as an illustration of this point: The patient, a colored v-para, occupied the *only* bed in a small, dark, ill-smelling room. The day was cold. A small coal fire was in a broken-down grate. *Around this fire stood four small* children. In this room the whole family lived, cooked and slept. There were just two chairs and one dirty kitchen table in the room. Three plates and two cups and saucers were scattered on this table. On the floor, in one corner of the room, was a washtub half full of dirty soapsuds, left from the washing of clothes the week before, and which emitted a horrible stench. The patient asked for a drink of water, whereupon the oldest girl of the family advanced towards the washtub and, with cup in hand, proceeded to dip from a wooden water bucket which was floating around in the foul-smelling mass of soapsuds. On being reminded of the possible contamination of this drinking water, the patient remarked, "O! that's all right." It is needless to say that some of the neighbors were depended on to furnish hot water for the case in hand. The mattress on which the woman lay was exceedingly dirty. An old quilt, equally as black and greasy, served as a coverlid. This woman was up attending to her household duties at the end of a week, with no ill effects.

Notwithstanding heroic treatment, both sedative and eliminative, and, in addition, the constant services of a trained nurse, the patient died ten hours later.

The third death resulted from general septic peritonitis, supervening on rupture of a gonorrheal pus tube, as revealed by the autopsy. This was a colored primipara with a true conjugate of just three inches. I sent the patient to the Virginia Hospital and effected a delivery with forceps, the labor being too far advanced to render version safe. The child, already weak, died during delivery. The patient did well for four days, when peritonitis developed, ending in death three days later. Being anxious to know the cause of this infection, an autopsy was made, with the assistance of Drs. H. M. Taylor and Virginius Harrison, who happened to be in the hospital at the time, and, instead of finding traumatism of the lower segment of the uterus, as was suspected, we found a ruptured pus tube on the right. Inquiry of the patient's mother brought out the statement that she had been treated for gonorrhea two years before.

The fourth death occurred in a multipara at the eighth month, greatly reduced in flesh and strength by tuberculosis. She lost more than the usual amount of blood at delivery, and, though the uterus responded quickly to friction and ergot, the patient proved to be unequal to the shock of this hemorrhage in her already weakened condition. Despite active treatment for shock, the patient died ten hours later.

The fifth death resulted directly from apoplexy, induced by puerperal convulsions. The history of this case is unique and is worthy of record. A young, robust primipara, eight months pregnant, complained, while seated at the breakfast table, of severe headache, numbness of the left arm and leg and also soreness of the tongue. This was about 7 o'clock. She had walked down a winding stairway to the room below. While eating she had a severe convulsion which lasted several minutes. In a quarter of an hour she had another convulsion, more severe than the one preceding and soon passed into a state of coma. The attendants at the Seventeenth-street station saw her for the first time three hours later. I saw the case a few moments afterward. It was soon noticed that the recurring convulsions were confined entirely to the right side. Venesection, followed by saline transfusion directly into the vein, was resorted to with seeming benefit for a short time. The hot pack was also used to aid elimination, but I wish to emphasize one procedure which was pushed vigorously and which gave promise of good results. I refer to prolonged high irrigation of the colon, carried to the point of inducing a free flow of bile. Not less than thirty gallons of saline solution first, and plain hot water later, were used by the return flow rectal tube. This treatment has been used almost to the exclusion of all other eliminating methods in the Paris Maternity, with the result of reducing the mortality from 27 per cent. to 6 per cent. in comparative series of fifty cases, and I am encouraged to give it a further trial. Of course, this case is not a fair test; neither would I be justified in drawing conclusions from one patient; yet I am inclined to believe that, had there not been this cerebral hemorrhage, the eclamptic symptoms would have been held in abeyance. In reverting to the history of this case the patient unquestionably had convulsions during the night, which were responsible for the hemorrhage in the arm and leg center.

While there have been five deaths, it will be seen that not one of these resulted from outside or preventable infection.

It is equally gratifying to know that there have been only four cases of sepsis, and two of these had been attended by midwives before coming under the care of this service. Of the other two cases, one has already been referred to—the case of ruptured pus tube resulting in general peritonitis and death. The fourth and last case of sepsis was a white multipara who had a most extensive laceration of the cervix, extending above the vaginal junction. A great quantity of blood had been lost and she was in a bad condition to resist infection. She was taken to the Virginia Hospital thirty-six hours after delivery, when the symptoms were strongly suggestive of general peritonitis. A careful examination now revealed the cervical injury. Her condition for several days was critical, owing to the large pelvic abscess, which developed under the right broad ligament. On leaving the hospital at the end of six weeks, an inspection, with the aid of Dr. H. Ward Randolph, resident physician, showed that the vaginal portion of this tear had nearly cicatrized. There was yet some discharge which communicated by a sinus with the abscess. The uterus was firmly fixed and drawn to that side. She was sent home with the promise of operative intervention at a subsequent period.

COMPARATIVE MORTALITY RATES.

I have already emphasized the fact that this service was outdoor work (only seven cases receiving hospital treatment) for the special reason that I wish just here to introduce a comparative study of the mortality statistics of some of the oldest and best known obstetric clinics abroad, in some of which the service is more evenly apportioned between indoor and outdoor cases.

For example: Our own mortality is exactly .005 (one-half of 1 per cent.), while that of the obstetric clinic at Prague is reported to be .0085, the School of Baudelocque at Paris .0066 and the University Frauen Klinik at Berlin .0193. Compared with the Society of the Lying-In Hospital of New York City, whose prestige covers more than 100 years, I find reported for their outdoor department 2,723 labors in one year, with ten deaths, or a mortality rate of nearly .0037.

A MODIFIED CREDE METHOD.

In addition to the precautions taken against infection during the first and second stages of labor already referred to, a very important factor in this reduction of morbidity and mortality is believed to be the scrupulous care bestowed on the genital tract during the third stage of labor, not only in guarding it against the invasion of pathogenic organisms, but also in observing the time for and the manner of delivering the placenta. So thoroughly am I convinced that the hasty or precipitate resort to Credé's method is largely responsible for the incomplete delivery of the placenta and its membranes and for the sepsis frequently dependent thereon that it has been the uniform rule in this service to wait for Nature's signal for expelling the after-birth before adopting any method to excite uterine contraction.

Before describing the procedure observed in this clinic, I wish to say that the placing of one hand over the uterus as a sentinel, immediately after the child is born, must not be confounded with the grasp of the uterus in the Credé method. To be explicit: immediately on the birth of the child, one hand is gently placed over the uterus, especial care being taken neither to make friction nor to excite contractions so long as the uterus remains firm. This hand is regarded as a sentinel for Nature's signal that the placenta is separated, this signal being a slight rising of the fundus while it is yet firm, giving to the hand the sensation of being pushed up, as pointed out by Pinard and Schroeder some years ago. The discovery made by the foregoing authorities was not generally accepted at first, but is now being recognized. This lifting up of the uterus may occur in much less time than the average—"twenty minutes"—or it may be delayed thirty minutes or longer. As soon as this condition is observed, the uterus is grasped firmly, for the first time, with one or both hands and pressed downward in the axis of the superior strait. If, after waiting three-quarters of an hour, there is still no sign of placental separation, as described above, the typical Credé method is resorted to without further delay.

When it comes to the delivery of the membranes, the practice in this clinic is again a slight divergence from the general custom. Instead of twisting them into a rope, as recommended by many, we have found that the possibility of leaving behind a portion of the membranes is greatly lessened by simply waiting a few minutes to allow them to trail out, provided the grasp on the uterus has been lessened to admit of that normal relaxation which follows uterine contraction. In general terms, all attendants act on the principle that every placenta, at full term, has its own time to separate, and that it is better to wait until that time arrives before resorting to artificial stimulation of the uterus. By the rigid observance of this rule, it has been a rare occurrence in the past few years to have even a "retained" placenta, and, as for an adherent placenta, such a condition has not been met with at all.

Broadly speaking, the students in this clinic are taught to regard the genital tract absolutely as a *noli-me-tangere* after the child is born, and experience has demonstrated the fact that, just in proportion as it is so regarded will the puerperium be marked by fewer deviations from the normal.

CONCLUSIONS.

Among the deductions from this report are believed to be the following:

1. The results in this service are confirmatory of Krönig's statement that the vagina of a pregnant woman is free from pus-producing bacteria.

2. Thorough and continuous disinfection of hands and external genitalia are the chief safeguards against infection.

3. The unhygienic surroundings in the homes of the poorer classes must be considered as minor factors in the causation of sepsis. They become operative only when scrupulous care is not observed with regard to vaginal examinations.

4. Not only is the puerperal morbidity and mortality among outdoor clinics greatly below that in private practice (the mortality rate in this clinic being one-half of 1 per cent.), but it would appear that this class of patients is endowed with powers of resistance not found in the higher walks of life.

5. Nature has her own time for separating and expelling the placenta as indicated by a signal easy of recognition.

6. Any method designed to excite uterine contraction before Nature indicates that the placenta is ready to be cast off must be regarded as precipitate, and not in accord with natural processes.

7. Just in proportion as the genital tract is regarded absolutely as a *noli-me-tangere* after the child is born, will the puerperium be marked by fewer deviations from the normal.

Special Article.

THE PURIFICATION OF WATER SUPPLIES BY SLOW SAND FILTRATION.

I.

GENERAL PRINCIPLES AND METHODS.

During the last fifty years the individual or family water supply has been gradually supplanted by the public water supply in nearly all civilized countries. In the United States the number of waterworks has increased from 83 in 1850 to 598 in 1880 and 3,196 in 1896. This fundamental change in the manner of procuring household drinking water has brought in its train many new problems. In several respects the substitution of public for private control is distinctly in the direction of sanitary betterment. The abandonment of the shallow well, for example, has been of unmixed benefit even in communities of moderate size where pollution of the soil is not extreme. It has been noticed that in a general way the introduction of public water supplies is coincident with a remarkable decline in typhoid fever death-rates (Fig. 1).

Although it is thus true that a public water supply is better than the average private supply, it is evident also that the public supply is not without its own peculiar danger. The peril to the whole community is in a sense greatly enhanced by the introduction of a public supply, since if contamination of the general supply ever occurs a much larger number of persons will be infected than under conditions where each family is supplied from an independent source. The proper methods of controlling and safeguarding municipal water sources have become, therefore, a matter of moment to the whole community.

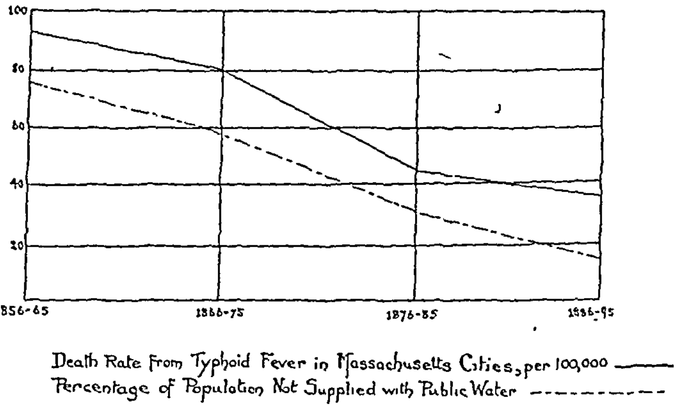

Figure 1.

(From the Twenty-eighth Annual Report of the State Board of Health of Massachusetts, 1896, p. 781.)

The largest and most satisfactory city water supplies in this country and in Europe are obtained by one of three methods. One of these consists in the impounding or damming of small streams that drain uninhabited or but sparsely inhabited areas. This method usually involves the construction of reservoirs with a large storage capacity, a procedure possessing a notable advantage in that the sanitary quality of water is known to improve during storage. The majority of the satisfactory water supplies of large cities in the United States are of this character, the New York and Boston supplies being well-known examples. This method is applicable especially where the topography of the country is suitable for storage. In a flat region or a densely populated one, supplies of this character are rarely available.

A second method of obtaining a water supply is by utilizing the so-called ground water; that is, water which has apparently become partially or thoroughly purified by percolation through layers of soil. The "spring" waters and the "deep well" and "artesian" waters belong to this class. Such water is usually clear and palatable, although often "hard"; that is to say, containing in solution certain mineral salts which cause the formation of "boiler scale," lead to an excessive consumption of soap, and are otherwise economically undesirable. On the sanitary side, the quality of ground waters is frequently unexceptionable, although lately they have come to be looked on with less favor than formerly. Several of the largest European city supplies are of ground water origin. The city of Paris, for example, is chiefly supplied with ground water brought from several distant places at great expense, and, although the present supply is somewhat inadequate, a large portion of it is of excellent quality. Many other European cities, such as Vienna, Budapest, Brussels, Leipsic, Cologne, Munich and others are similarly supplied. In the United States no city of the first rank is at present wholly supplied with ground water, although many cities and towns of small size have successfully introduced water of this character. A very large amount of water is demanded by most American municipalities, and the limitations placed by geologic conditions on both the quality and quantity of ground water restrict the use of this source of supply to certain localities.

A third method of obtaining a wholesome water supply consists in treating surface waters, such as the water of rivers or large lakes, by the process of sand filtration. This method of obtaining a good supply is very largely used at the present time in England and on the continent of Europe, especially in Germany and Holland. It is estimated that a population of nearly twenty-five millions in European cities is now furnished with water purified in this way. The list of cities using sand filters includes Berlin, Hamburg, Breslau, London, Amsterdam, Antwerp and St. Petersburg.

In the United States many cities are so situated that neither the first nor the second method of obtaining an ample water-supply is available, and in nearly all instances such cities have up to the present contented themselves with the use of unfiltered surface water from the nearest lake or river. The possible opportunities of contamination to which a surface water in a populous district is exposed are well known and need hardly be considered in detail. It is only too common in many parts of the United States to allow objectionable drainage to pass into a stream from which some town or city derives its water supply. Rivers have been allowed to become open sewers, lakes gigantic cesspools. The danger from this source is generally recognized. In Germany the use of surface waters for public supply without filtration is altogether prohibited. Since it seems to be true that by far the larger number of city dwellers in the United States must continue to depend on some kind of surface water for a supply, it is important to consider what the method of purification of surface water by sand filtration really implies, under what conditions a sand filter may be installed and effectively operated, and what results may be reasonably hoped for in the way of benefit to the public health.

The first sand filter of which any record exists was built in 1829 for the Chelsea Water Company in London. The primary object of this filter was to clarify the water, although the sanitary advantages seem to have been in part recognized. In 1855 the filtration of all the surface waters supplied to London was made compulsory. Soon after this time sand filters were constructed at various places on the continent of Europe, at first from the designs and under the supervision of English engineers. The Berlin filter plant was built in 1856 by an English company and was purchased by the city in 1873. In late years the installation of filters has become very general throughout northern Europe.

The accumulated experience of the last fifty years in the construction and operation of filtration systems has led to the working out of a fairly uniform method of procedure. The unit filter consists of a water-tight masonry tank or reservoir, with a surface area ranging in practice from about one-half of an acre to nearly two acres. On the floor of these reservoirs a series of perforated pipes or loose underdrains is laid, over which are deposited layers of crushed stone and gravel of increasing fineness, and on the gravel is laid finally the bed of sand that constitutes the efficient body of the filter. This layer of sand usually varies from about two feet to four feet in depth. In Germany the law stipulates that the minimum thickness of the sand layer shall not be permitted to fall below twelve inches.

In nearly all instances where filter beds are used it has been found highly advantageous to provide a settling basin through which the raw water shall pass on its way to the filter. Many of the surface waters that are used for public supplies are so turbid that their direct application to the sand bed would cause rapid clogging, and preliminary sedimentation is, hence, most desirable.

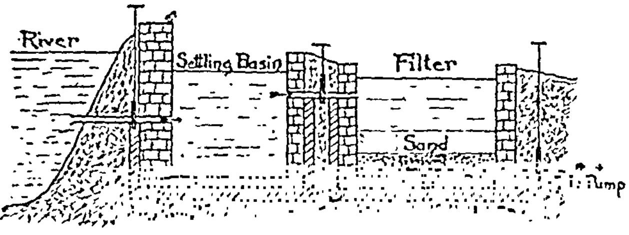

Fig. 2.—Diagram showing general plan of filter plant. (Adapted from Hazen.)

The accompanying diagram (Fig. 2) illustrates the usual relations between the source of the raw water, the sedimentation basin and the filter bed proper.

OPEN AND COVERED FILTER BEDS.

The question of providing covers or roofs for filter beds in cold climates is one that always demands special consideration. The great additional cost of the covers renders their construction inadvisable on economic grounds except where they are absolutely required by the climatic conditions. Under certain circumstances roofing of the filters is imperative. In many parts of Germany it has been found necessary to provide covers for filters which were originally constructed on the open system. The great obstacle to the use of open filters consists in the formation of ice which interferes with the effective operation of the filter, and not only increases the difficulty of cleaning the surface of the sand in winter, but materially lessens the hygienic efficacy of the filter. In Berlin an epidemic of typhoid fever occurring in 1889 was traced to the injurious effect of cold weather on the working of the filter, and this event led to the abandonment of open filters in that city. In the city of Altona, a suburb of Hamburg, a slight epidemic of cholera appeared in the winter of 1893 which was likewise attributed with excellent reason to the disturbance of the filters by ice. The various degrees of difficulty experienced from the formation of ice in those cities possessing an open filter system have led to the estimate that the use of covers is necessary in all localities where the average January temperature is below 32 F. On this basis, the area in the United States within which covered filters would be necessary lies north of a line passing through Philadelphia, Pittsburg, Cincinnati and St. Louis. The use of covered filters possesses the additional advantage that, owing to the inability of algæ to grow in the dark, the clogging of the filter is diminished and the frequency and expense of cleaning thereby reduced.

RATE OF FILTRATION.

It is evident that the higher the rate of filtration, the smaller is the filtering area needed to supply a given quantity of water. The maintenance of a high rate therefore diminishes proportionately the cost of construction of the filter-plant. In practice it is not found possible to exceed a certain maximum rate without impairing the quality of the filtered water, since if the filter is forced beyond its capacity, efficient purification is not achieved and the aim of the whole system is defeated. The rate that can be successfully used in any given locality depends primarily on the character of the water to be treated. A turbid and polluted water can not be filtered rapidly with as satisfactory results as water from a clearer and purer source. The rate maintained for most European works averages between two and three million gallons daily per acre of filtering surface. The filter beds at Hamburg, where the highly polluted water of the Elbe river is treated, are operated at the rate of about 1,600,000 gallons daily per acre. At Zurich, where a clear and relatively pure lake water is used, the very high rate of over 7,000,000 gallons is successfully maintained. A rate of 3,000,000 to 4,000,000 gallons would probably be a very satisfactory rate for the class of surface waters that would most frequently be dealt with by filtration in this country. In adjusting the rate it is important to maintain a fairly uniform head, since sudden changes are likely to produce disturbances in the upper sand layers, and thereby reduce the efficiency of the filter.

Nearly all the sand filters in actual use are operated on the principle of continuous application of the water, and a body of water of substantially uniform depth is allowed to stand constantly over the surface of the sand. At a few places, however, the system of intermittent application of water is practiced, but it possesses no material advantage over the continuous process and is somewhat more troublesome to operate. The city of Chemnitz, Germany, is one of the best-known instances where intermittent filtration is used for a municipal water supply.

OPERATION OF FILTERS.

In the life of every sand filter the time comes sooner or later when the filter is so clogged that a satisfactory quantity of water no longer passes. The filter must then be cleaned and put again into a condition for effective operation. This is accomplished by draining off the water from the surface of the filter and scraping away a thin layer of sand. The scraping is done by workmen with wide shovels and the sand is usually removed in barrows to some spot where it can be carefully washed and saved for subsequent replacement. A layer varying from .5 of an inch to slightly over one inch is ordinarily removed at a single scraping. The frequency with which scraping has to be practiced depends chiefly on the quality of the water, a turbid water naturally producing clogging more rapidly than water that contains little suspended matter. The rate of filtration and the size of sand grain are also important factors in determining the frequency of scrapings. Twenty-five days is perhaps a fair average of the life of a filter between scrapings. In well-managed works the interval should rarely fall below ten days, and if the preliminary sedimentation is effective, it may well range much higher than this. When the depth of the sand layer has become reduced by successive scrapings to the minimum thickness deemed desirable (never less than 12 inches), the filter is remade, generally with the sand which has been previously removed in scraping, and which after washing is now restored to it. Since a certain proportion of a given filtering area is always out of service while the cleaning process is going on, it is necessary in constructing a filter to plan for a somewhat greater area than would suffice if continuous operation of the whole surface were feasible.

COST OF FILTERS.

The cost of constructing filters depends largely on local conditions. If a very turbid water, for example, is to be treated, an unusually large filtering area must be provided, and the cost of construction is proportionately increased. In Berlin, covered filters of about .6 acre each have been built for approximately $70,000 per acre. One engineering authority estimates that the cost of carefully constructed covered filters in Europe averages about $68,000 per acre of filtering surface. The total cost of the Hamburg plant, one of the most recent of European filtering systems, was nearly $2,280,000. This system includes thirty-four acres of filtering surface, and was designed to supply a population of about 600,000. The data that exist concerning the cost of sand filters in the United States indicate that, owing to the use of more economical designs and to the employment of concrete, the cost of construction should be considerably lower than for European filters. Within the last few years several American filter plants of moderate size and with covered beds have been built at an expense of about $45,000 per acre.

COST OF OPERATION.

The chief sources of outlay for operation are due to the necessity for scraping the sand beds, washing the sand and for supervising the efficiency of the plant. For this latter purpose all well-equipped filter plants include a bacteriologic laboratory, or in some way make provision for testing the quality of the filtered water. The cost of scraping and handling the sand ordinarily ranges from 80 cents to $1.20 per million gallons of filtered water. If the conditions are such as to require special labor for the removal of ice, the total operating expense may be greatly increased. At Lawrence, Mass., where in spite of the cold climate open filters are in use, the cost of removing ice ranged as high in one year as $2.00 per million gallons. Engineering authorities have estimated that, in general, the total cost of filtration, including depreciation and interest on the expense of construction, as well as operating expenses, averages about $7.00 to $9.00 per million gallons of filtered water.

EFFICIENCY OF FILTRATION.

Since the main object of sand filtration is to secure a wholesome water, it is necessary for the engineers in charge of the waterworks to be guided by carefully-drawn regulations concerning maintenance of a safe rate, the quality of the effluent, and other factors of importance. The German Imperial Board of Health has formulated rules requiring that each sand filter shall be tested daily by bacterial methods, that the rate of filtration shall not exceed one hundred millimeters per hour (about 2,600,000 gallons daily per acre), and that the filtered water shall be admitted to the mains only when it contains less than one hundred bacteria per cubic centimeter, the number being determined by a specified method. It has not been found difficult to secure a high bacterial efficiency under these standards. In many cases raw river waters containing several thousands or even tens of thousands of bacteria per c.c. can be made to yield an effluent containing a relatively insignificant number of microbes. At Berlin, for example, during one series of observations the number of bacteria in the water applied to the filters ranged from 4,400 to 7,980, and the effluent during the same period contained from 22 to 52. In general, over 99 per cent. of the bacteria are removed by sand filtration. The experiment of applying particular and easily recognizable kinds of bacteria to the filter beds and testing at frequent intervals for their appearance in the effluent has shown that the actual bacterial efficiency is even greater than the above figures indicate, and that the number of bacteria found in an ordinary effluent does not represent the number actually passing through the filters, but is swollen by a certain proportion of microbes washed out of the underdrains or by accidental contamination during collection. It is a significant fact that in well-conducted filter works, while the number of bacteria in the applied water may vary greatly from hour to hour and from day to day, the number in the effluent remains fairly constant.

A more conclusive measure of efficiency than the percentage of removal of bacteria is afforded by the prevalence of typhoid fever in communities supplied respectively with filtered and unfiltered water. The experience of the city of Hamburg is one of the most convincing instances of this nature. The average death rate from typhoid fever from 1887-1891 was 47.2. A modern sand filter was installed and put in operation in May, 1893, with the result that the typhoid fever death rate for the five years 1894-1898 fell[1] to 7.2. It is true, without exception, that whenever a city has changed from the use of a raw surface water to a sand-filtered water, the typhoid fever death rate has at once responded with a marked and permanent decline.

The relative exemption from typhoid fever possessed by cities that are supplied with sand-filtered water as compared with those using raw surface water is shown by a comparison of the typhoid fever death rate in certain European cities using sand filters with the rate in certain American cities, some of which are provided with a surface water deemed to be fairly well guarded and free from the grosser forms of pollution: Berlin, 0.50; London,[2] 1.40; Hamburg, 0.90; Rotterdam, 0.20; Boston, 2.79; New York, 1.81; Baltimore, 4.50; St. Louis, 4.70.

(To be continued.)

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[1] The cholera year 1892, and the year 1893, in which the filter was not operative during the whole period, are omitted from the comparison.

[2] About five-sixths of the total supply is filtered.

Coffee-Drinking.—Notwithstanding the scare advertisements of health substitutes for coffee, says the *American Journal of Pharmacy*, there is no cause for apprehending danger to the race at large from coffee-drinking. After generations of almost universal coffee-drinkers, our own times see men of gigantic intellect in all realms of activity, our athletes are able to make sudden bursts of effort equal to any in history, and our soldiers aquit themselves manfully in fatiguing campaigns in torrid climes. The life-insurance companies, constantly warring against all that lessens longevity or conduces to abnormal organs, nerves and actions, seem content to accept the use of coffee as one of the ordinary elements of every-day life.

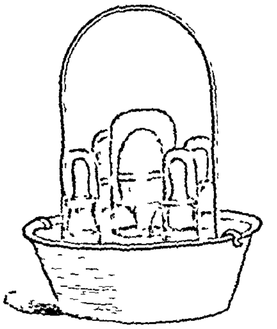
New Appliance.

AN OPHTHALMIC TREATMENT OUTFIT.[*]

WM. CAMPBELL POSEY, M.D.
PHILADELPHIA.

This appliance is presented to the Section with a view to facilitating and further perfecting the details of treatment of ophthalmic cases. It consists of a series of bottles, contained in a nickel-plated caster-like holder, which in its turn rests in an enameled pan. The bottles are five in number; one, with a capacity of four ounces, holds a boracic acid or other mild antiseptic solution for the purpose of flushing the eye; the other four are one-ounce bottles and contain such drugs as may be required. Each bottle is provided with a pipette, which serves as an accurately fitting stopper, and also with a glass cover, to further prevent the entrance of germs or dust into the bottle or dropper.

By this arrangement there is secured for each patient in hospital service a complete set of bottles for his individual use, thereby avoiding possible infection from other patients or the instillation into his eyes of drugs intended for another. The outfit may be employed in operations and will be found convenient in the treatment of cases in their own homes, either after operations or where there is inflammation requiring protracted treatment and the employment of a number of drugs. The pan is intended to hold ice when ice compresses are to be applied, or as a vessel in which to heat the water, when hot compresses are desired. The pan is attached to the caster-like holder by a double spring, and although the outfit is intended to rest on the table at the bedside, it can be carried about if occasion demands. The various parts of the outfit can be readily sterilized and may be used in successive cases.



Clinical Report.

CASE OF SKIN GRAFTING.

JAMES FREDERIC CLARKE, M.D.
Lecturer on Hygiene, State University of Iowa, Department of Medicine,
FAIRFIELD, IOWA.

A few weeks ago a patient presented with contraction of the upper eyelid from a burn. The cilia was drawn high on the forehead. An incision was made 2 mm. above the cilia, the lid was dissected down and the upper and lower lids stitched together. The exposed surface was at once covered with one piece of skin taken from the forearm of the patient. The piece removed from the forearm was an oval 1¾ by 3 inches in size. This was held in place by 6 or 8 sutures, covered with gutta-percha tissue and a cotton compress. On removing the dressings on the fifth day the skin graft was pink in color and sensitive to the touch. It had a well-established circulation and sensation in this short time. The complete success of the transfer of this large piece of skin was quite a satisfaction, seemingly so much better than sliding skin from the temple, which would have increased the scars.

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[*] Exhibited before the Section on Ophthalmology of the American Medical Association at the Fifty-fourth Annual Session

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NEPHROTOXINS.

The existence and experimental production of specific cell poisons, the cytotoxins or cytolysins of which we hear so much nowadays, have been the means of greatly stimulating the interest in cellular reactions. Many enthusiastic investigators believed that in this field would be found the quick solution of some of the obscure problems in the genesis of disease. Of the cytotoxins for the cells of solid organs nephrotoxins, or special poisons for the cells of the kidney, have been studied most extensively. The renal cells seemed to respond readily to normal and to artificially-produced toxins, and the resulting functional and morphologic changes presented such analogy to the changes in some forms of nephritis that it appeared to many as if we had come into possession of the key that would unlock the mysteries connected with the etiology and genesis of nephritis and the accompanying disturbances of the circulatory apparatus, as well as uremia.

It is as yet too early to decide definitely to what extent the new method of investigation will give final solution of these complex problems. The conservative observer might be tempted to say somewhat sneeringly that so far not much else has been accomplished than to substitute new names for the old and that the ultimate mechanism of nephritis is still unknown. A fair consideration of recent work in this field, however, can not but lead to the conviction that actual progress in renal pathology is making as the direct result of the study of nephrotoxins. A brief review of the experimental study of nephrotoxins by Pearce[1] will serve to make this point clear.

It has been claimed by several European investigators that the ligation of one ureter or of the vessels of one kidney leads to degenerative changes in the opposite kidney due to the action of toxic substances which have been called autonephrolysins or autonephrotoxins. Pearce made careful experiments to test this conclusion with the result that no other changes were established in the undisturbed kidney than would follow simple nephrectomy, thus demonstrating that the products of dissolution of one kidney have no direct, specific harmful action on the fellow kidney. Pearce, furthermore, controverts the claim that "isonephrotoxins" are easily obtainable. By isonephrotoxin is meant a poison for the kidneys of animals of the same species as the one furnishing the poisonous serum. Such serum has been claimed to develop after unilateral ligation of the ureter or the renal vessels as well as after repeated injection of, let us say, rabbit's kidney into rabbits. In Pearce's experiments it was found that the injection of pure, untreated, normal rabbit's serum causes as great changes as the injection of supposedly isonephrotoxic serum. Pearce succeeded in producing a strong nephrotoxin by immunization of rabbit's with dog's kidney. In order to eliminate so far as possible the simultaneous production of a toxin for the red corpuscles of the dog (hemolysin) it was necessary to use organs well washed to free them from blood. Now, in previous experiments with heteronephrotoxic serum the action of this hemolysin has not been excluded. The action of the hemolysin consists in laking red blood corpuscles in such numbers as to cause hemoglobinuria, and this is in itself sufficient to cause changes in the kidneys of the animal used. Pearce found that even after the use of washed kidneys for injection there developed hemolytic properties in the serum of the animals injected, but in much less degree than in the animals treated with unwashed organs. Heteronephrotoxic serum thus produced causes albuminuria, cast excretion, degeneration in the epithelium and glomeruli, but no noticeable interstitial changes. Chronic renal lesions could not be established by the repeated injections of toxic serum, and there were no immediate changes in the blood pressure. Pearce also found that hepatotoxic serum, produced by injecting rabbits with dog's washed liver, causes changes in the kidneys of dogs, thus bringing into prominence a correlative action of several kinds of serum which has been noted also by previous observers. In the course of his work he had occasion to note that in dogs spontaneous nephritis is not at all infrequent, and the serum of nephritic dogs is toxic for the renal cells of normal dogs.

We see that the work of Dr. Pearce, to a large extent, consists in disproval of extravagant claims of previous workers and in eliminating manifest sources of error. This somewhat unpleasant task is often necessary in order to clear the field for actual progress. There remain, principally as the result of Pearce's own work, some important well-established facts, namely, that the renal cells of the dog are altered in function and form by the injection of serum of rabbits treated with dog's kidney; that toxic serums are correlative in their action, indicating that various cells are similar in chemical structure, and, finally, that the serum of nephritic dogs is nephrotoxic for normal dogs. The question of the source and nature of this nephrotoxic substance furnishes interesting problems for future work. We believe that the study of somatogenic cytotoxins is on a firmer basis as the result of the investigations of Dr. Pearce, but it is evident that the explanation of chronic nephritis, for instance, is still far off.

MANUAL TRAINING FOR GIRLS.

In an address[1] to the graduating class of Johns Hopkins Hospital Training School for Nurses, Isabel

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[1] Univ. of Penn. Med. Bulletin, 1903, xvi, 217-234.

[1] Bulletin of Johns Hopkins Hosp., September, 1903.

Hampton Robb, formerly superintendent of the school, has discussed some of the defects in trained nurses. She insists that "inefficiency, superficiality and lack of thoroughness belong not to the graduate nurse alone, but are the common property of modern woman, and belong to the average American household." Out of 175 applicants for admission to our training school for nurses only forty were considered worthy. The deficiency of women in the practical knowledge of the affairs of the house is strongly emphasized. An effort is now being made in many of the more progressive training schools for nurses, both at home and abroad, to overcome, by means of a preliminary course, this deficiency as regards the care of the household and the properties of food. Desirable as this is, it is only an effort to accomplish for the few what should be a part of the education of every girl in the public schools. No one knows better than the physician how inadequate are the ideas of women in general regarding the proper preparation of foods, and how impossible it is to obtain proper food for the sick in a great many households. Improperly prepared and unwholesome food is a most fruitful cause of disordered digestion, and careful observers have even ascribed much of the use of alcoholics by the poorer classes to this cause.

While there is a tendency to give manual training an important place in the education of boys, is it not possible that manual training for girls is of equal importance? In the case of girls this training would naturally have to do with the subjects which would not only develop manual dexterity, but which would also serve to stimulate intelligent interest in the things with which they would have to deal in the home. Is there any reason why a girl should not be as much instructed and interested in the making of a dress, a stocking or a loaf of bread, as her brother is in the construction of a box or a machine? In this way the use of the needle, the cooking and preparation of foods, cleanliness and the care of the house could be made matters of interest instead of drudgery, and the school girl would introduce the elements of domestic hygiene into many homes into which they could not be forced by health officers and all sorts of legislation.

If such instruction were given to girls in the public schools, it would perhaps help to dispel the idea which has unfortunately become so prominent in the minds of young women that "housework" is mere drudgery and calls for only an inferior degree of intelligence. Anything is worth while which will teach girls that the problems of the home call for the exercise of the highest degrees of intelligence, training and education, and that the pleasures and satisfaction of doing household duties intelligently in the end can not be compared with the routine work of the shop and the factory.

We wish that the excellent address of Mrs. Robb could be read by every one who has to do with the education of girls. Many an intelligent and conscientious mother would find in it ideas and stimulus that would benefit directly the household and all its members, especially the women, and in the end serve to reanimate the interests of woman in her special work.

RECENT WORK ON THE BACTERICIDAL ACTION OF SERUM OF ANIMALS SUSCEPTIBLE TO ANTHRAX.

It is a well-established fact that normal human serum and the serums of many of the lower animals possess *in vitro* strongly bactericidal properties for many pathogenic bacteria, and yet both human beings and animals are often susceptible to infection with the organisms which are killed by their serums in test-tube experiments. As examples of such cases may be mentioned typhoid fever, dysentery and anthrax. One c.c. of normal human serum in a test tube will kill thousands of typhoid bacilli or dysentery bacilli and yet there are times when these organisms gain entrance into the body, multiply and produce their respective disease. Rabbits are very susceptible to infection with anthrax bacilli in spite of the fact that their blood serum is capable of killing thousands of these organisms when added to a small quantity of the serum in a test tube. On the other hand, it has been found that dogs are relatively immune, and chickens are almost absolutely immune from anthrax, though their extravascular blood serums possess no bactericidal properties for *B. anthracis.*

The serum of a rabbit which has died of anthrax has not lost its bacteriolytic serum-complement, and it is still capable of killing anthrax bacilli, showing that the infection can not be explained on the score of a loss of the complement in the serum. It is evident, therefore, that there is here a sharp disagreement between the facts found by test-tube experiments and those observed in the living animal body; this goes to show that the results obtained by test-tube experiments may be very far from representing what takes place in the animal body, because the conditions are so widely different.

Test-tube experiments, however, are at present one of the best means we have for attacking such problems as immunity, and the aim of the experimenter must always be to approach, in the test tube, the conditions found in the animal body. A decided step in this direction was recently taken by Bail and Pettersson[1] in their work on anthrax. Normal rabbit's serum, as indicated above, is strongly bactericidal for *B. anthracis,* when the latter is added to a small quantity of the serum in a test tube. The experimenters mentioned have found that the results are very different if instead of clear serum they had used serum to which had been added finely emulsified fresh organs (such as liver, kidney or muscle) from the rabbit which yielded the serum. Serum thus treated with organ-suspensions is deprived of its germicidal property, even if the tissue cells and fragments are centrifugalized out before the bacteria are added. The addition to the serum of a few drops of extract from these organs, in physiologic salt solution, has a similar effect. It is interesting to note that these extracts in themselves have no bactericidal properties. Heated beef serum and dog's serum which are normally not bactericidal for anthrax bacilli are rendered so by treating them with fresh bloodless organs of rabbits. The normal beef and dog's serum may also be activated by the addition of traces of a rabbit's serum which has been inactivated by the admixture of organ suspensions.

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[1] Centralbl. f. Bakt., 1903, xxxiv, 445.

It may be objected that the conditions here were very different from those found in the body because the experimenters were working with dead cells, even if they were removed from the body only two hours previously. It is nevertheless a decided advance toward approximating, in the test tube, the conditions found in the body. We believe that the observations of Bail and Pettersson constitute a step in advance toward the explanation of the apparently paradoxic phenomena noted above in regard to certain infections. These observations show once more the wonderful complexity of the phenomena of infection and immunity.

LEGISLATION AGAINST THE SALE OF COCAIN.

A bill has been introduced in the legislature of Alabama regulating the practice of pharmacists, establishing a state laboratory at the capital where all applicants for license will be examined. A special provision—and this is why we call attention to the matter—throws additional restrictions on the sale of cocain, the use of which has become so great an evil among the negroes of the South. Druggists will be prohibited, if the law is passed, from selling cocain except on the prescription of a physician, and the physician must, if called on, give good reasons for prescribing the drug. While this last measure seems a little extreme, it is possible that there may be physicians who would prescribe dangerous drugs without good reason, simply to meet the appetite of patients, and such may very well come under the provisions of the law.

MASSACHUSETTS "ALLOPATHS."

The Massachusetts Bureau of Labor Statistics has been taking a census of persons employed in "gainful" occupations. Whether or not the majority of physicians are engaged in "gainful" occupations they are included in these statistics. The *Boston Medical and Surgical Journal,*[1] among other comments, has the following:

> The number of physicians and physicians and surgeons who were willing to answer to the nick-name of "allopaths," was 1,432, of whom 56 were females. There were also 385 who answered to the name of "homeopaths," 83 eclectics, 77 specialists, and 2,213 who were not specified. Of the 4,188 persons employed in the profession of medicine, 486 were females.

It may not be altogether amiss to call the attention of the Massachusetts State Medical Society to the fact that while it has 2,607 members, according to our contemporary, there are said to be only 2,290 physicians in the state who are not sectarians, i. e., eclectics, homeopaths or "allopaths." Is not an "allopath" as much a sectarian as a homeopath? Seriously speaking, is it not time that the physician who is not a sectarian disregarded the nicknames given him by others and was satisfied to be just a plain physician? In this case an ignorant census-taker may have classed a physician as an "allopath" in spite of the physician's clear statement of his status, and much to his dismay on seeing the published report, but one such occurrence should put him on his guard. Let it be eternally understood that we are not "allopaths."

SAN FRANCISCO'S MAYOR AND BOARD OF HEALTH.

The report of the San Francisco Board of Health to the Hon. E. E. Schmitz, the mayor, is interesting reading. The reporting to the mayor was evidently purely perfunctory, and it seems also from a statement in the *Occidental Medical Times,* in which the report appears, that its publication in regular channels was denied. This is not to be wondered at, considering the fact that it contains the strongest kind of indictment of the honorable official to whom it is made, and that without any circumlocution or evasion whatever. The mayor is practically shown up as a falsifier and his various offenses against good morals and sanitation are thoroughly brought to light in language the reverse of complimentary. It is a curious thing that politicians who are generally supposed to be wary and far-seeing (though this latter is perhaps open to question) deliberately go to work to make history in which they appear in the most unfavorable light.

THE ORIGINATOR OF THE STOMACH TUBE.

We have briefly noticed in our Current Literature Department[1] an article by Friedenwald in the *Johns Hopkins Hospital Bulletin,* calling attention to the fact that the discovery of the stomach tube should be properly credited to one of our early American physicians, Dr. P. S. Physick, and not to Jukes and Bush, the English practitioners, to whom the honor of its invention has been assigned. It appears clear from this publication that Dr. Physick had employed the method for years when he published his first article on the subject in the *Eclectic Repertory,* Vol. III, p. 110, October, 1812, under the title of "An Account of a New Mode of Extracting the Poisonous Substances from the Stomach." In a later issue of the same journal Dr. Physick makes a correction to do justice to Dr. Alexander Monro, Jr., of Edinburgh, to whom he magnanimously surrenders the credit of the invention because the latter had mentioned its possibility in a thesis published in 1797, to which Dr. Physick's attention had been called since the publication of his article. The fact is, however, as shown by the article, Dr. Monro never utilized the suggestion, and Dr. Physick conceived the idea independently and had tubes made for the purpose as early as 1803, and in his lectures to students, as shown by several communications from former students, was in the habit of recommending the method at that early date. In those days the medical and scientific world did not look to America for important inventions, and it was easy for the English inventors to get the honor as against Dr. Physick. Credit was given to the former, though little attention seems to have been paid to the matter. Dr Friedenwald's article does justice to this early American pioneer of medicine.

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[1] Sept. 17, 1903.

[1] Page 879, abstract 43.

PROFESSOR SHERRINGTON'S VISIT.

At the opening of the new medical buildings of the University of Toronto on Thursday of this week, the address of the occasion was delivered by Prof. Charles Scott Sherrington of the University College of Liverpool. The new buildings in Toronto, beside being admirably adapted for the teaching of the medical sciences in a modern way, have been especially constructed and outfitted for the prosecution of original research. It is peculiarly fitting, therefore, that the distinguished director of the Thompson Yates Laboratories, who is England's greatest research physiologist, should have been chosen to make the formal address at the opening ceremonies. Modern physiologists are roughly divisible into two groups, one approaching the problems of physiology from the viewpoint of medicine and interesting itself, therefore, chiefly in the physiology of vertebrates; the other, from the viewpoint of general biology, physics and chemistry, more concerned perhaps with the simpler forms of life as met among the invertebrates. Both groups have in them representatives of the highest order of productive scholarship. To the former of the two groups Professor Sherrington belongs, though his researches and his publications show that he is not unsympathetic with the work of members of the other group. Professor Sherrington has enriched knowledge in every field of physiology in which he has worked, but his most striking services perhaps are those he has rendered to the physiology of the nervous system. His studies of the spinal nerves and of the segmental relations and especially his researches into the functions of the cerebrum of the vertebrates which stand nearest to man, have given him a fame that is world wide. We understand that Professor Sherrington is to visit some of the medical centers of the United States before he returns to England. We can assure him of a most cordial welcome in American physiologic laboratories, and we may perhaps hope that when he returns to Liverpool he may favor us with some impressions of American medicine as seen through an English physiologist's eye.

THE EYE IN NEURASTHENIA.

While the eye symptoms of neurasthenia are well known to many neurologists and ophthalmic specialists, it is possible that their true relation to the general condition is often overlooked. This is probably the more likely to be the case when there exists an actual defect of refraction which when detected is credited with the whole trouble. In a recent paper[1] Gradle calls attention to these facts and emphasizes the importance of attention to still other general systemic disorders that may reveal themselves most prominently in symptoms referred to ocular defects or accent such defects when they exist to a slight extent. These symptoms frequently involve more than merely the eyes, headaches, dizziness, etc., and are not uncommon. The most frequent of the underlying conditions he finds is anemia, while a general neurotic tendency, inherited or acquired, unhealthy environment, lack of exercise and other debilitating influences are hardly less important. Intestinal derangements may also play their part, and when any of these conditions coexist with a slight optic error, the unpleasant possibilities of the latter all come to the fore, sometimes to a distressing extent. Even with perfect emmetropia, intense asthenopic distress may result from pronounced anemia or intestinal autointoxication. Gradle deprecates, therefore, the tendency to treat these conditions by ordering weak glasses without due attention to the general condition, which may alone suffice to give relief. While he considers here only cases without muscular insufficiencies and expresses his doubt whether muscular anomalies that can only be demonstrated by suppressing binocular vision by prisms, etc., can cause asthenopia, it is almost impossible to avoid the suggestion that some of the troubles attributed to muscular eye-strain may be also due to such general conditions, associated it may be with latent refractive anomalies, or it may be, with latent muscular weakness, of itself incapable of causing the trouble under normal health conditions. Psychic influences, as Gradle points out, may have like effects, either through over-attention to the eyes or by exaggerating the effects of some slight and transient injury or inflammation. In these cases the hysterical character can be suspected after exclusion of other conditions and the possibility of suggestive therapy is indicated. It may succeed, but many cases are difficult to affect in this way. It is probable that closer attention to the systemic causes of ocular symptoms is needed not only on the part of the general practitioner, but sometimes possibly on the part of the ophthalmologist.

Medical News.

ALABAMA.

Personal.—Dr. Felix A. Gillespie, Hanceville, has been obliged to leave his work and go to Texas on account of his health.

Appropriation for Medical College.—The house of representatives has passed the bill appropriating $5,000 annually for four years to aid in the repairs and extensions of the buildings and the equipment of the medical department of the University of Alabama, Mobile.

Cocain Sale.—In the bill endorsed by the Alabama State Pharmaceutical Association, there are provisions prohibiting druggists from selling cocain except on physician's prescriptions, providing that the physician, if called on, shall show reason for prescribing the drug.

Neckties and Water.—A colored man, calling himself "Dr." S. M. Miller of Boston, who has been claiming to cure all diseases by selling the patient a necktie and "throwing in" a bottle of alleged medicine. has been arrested on complaint of the Lawrence County Medical Board, and despite his plea that the bottles contained nothing but water, was sentenced to pay a fine of $50 and to be imprisoned for six months, for practicing medicine without license.

CALIFORNIA.

Verdict Against Hospital.—A judgment for $350 against the French Hospital, San Francisco, was rendered, September 21, in the damage suit for $2,450 brought by Charles Pala, who claimed to have been unnecessarily burned by a hot-water bag while a patient at the hospital.

Epidemic at McCloud.—The investigation instituted by the State Board of Health regarding the epidemic of typhoid fever at McCloud has disclosed the facts that milk cans from a dairy in the neighborhood were washed in water from a stream contaminated by sewage, and found to contain the typhoid bacillus.

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[1] Arch. of Ophth., July.

The Law and the Doctors.—Luigi Gardini and G. B. Gerino, San Francisco, have been arrested, charged with practicing medicine without license.——Samuel R. Chamley, San Francisco, the cancer "specialist" whose license to practice was recently revoked by the state board, has begun an action against the board in the Superior Court, to have the revocation declared void, contending that the statute of Aug. 1, 1901, under which the board acted, is unconstitutional.

Personal.—Dr. Hubert N. Rowell, Berkeley, was kicked in the side by his racing mare, fracturing three ribs.——Dr. Robert F. Winchester, local surgeon for the Southern Pacific Railway at Santa Barbara, has resigned.——Dr. Beverly S. Nourse, Sacramento, has been appointed physician to the State Penitentiary, Folsom, vice Dr. A. B. Plant, resigned.——Dr. and Mrs. Dudley W. Stewart, Los Angeles, celebrated their fortieth wedding anniversary, September 9.——Dr. A. M. Smith has been appointed surgeon for the Southern Pacific Railway at Merced, vice Dr. William A. Whitlock, resigned.

CONNECTICUT.

Winsted Hospital Gets Bequest.—By the terms of the will of the late Salmon Swift the entire estate is devised to the Litchfield County Hospital, Winsted. The estate is appraised at from $5,000 to $10,000.

Infectious Diseases.—During August 6 cases of smallpox were reported, 80 of measles, 107 of scarlet fever, 1 of cerebrospinal fever, 89 of diphtheria. 43 of whooping cough, 170 of typhoid fever, and 15 of tuberculosis. A decided increase was noted in typhoid fever, the August average for the five preceding years having been 150.

August Deaths.—During August 1395 deaths were reported, equivalent to an annual mortality of 17.8 per 1,000. Of this number, 496, or 35.5 per cent., were due to infectious diseases, including diarrhea. Consumption caused 113 deaths; diarrhea, 290; nervous diseases, 166; heart disease, 79; violence, 73; whooping cough, 29; typhoid fever, 28; pneumonia, 51, and typhoid fever, 13.

A Plea for Medical Inspection of Schools.—The State Board of Health, in its August Bulletin, makes the following eloquent plea for medical inspection of schools:

> The laws of Connecticut are imperious in compelling attendance at school during school age. The laws of nature are more imperious and infallible than the laws of man. It is one of the laws of nature that a school child staying in the same school room with another who has a contagious malady is liable to contract such disease and then must accept its fate to endure it until recovery or a fatal termination.
>
> If our lawmakers compel our children to take such exposures, it is surely their duty to take every known means to reduce to the minimum the risk to health and life.
>
> It has been demonstrated that in all our well-filled public schools dangerous contagious diseases are continually present. It has long been observed that epidemic diseases are more prevalent during the school sessions than in the vacation periods. It is not the school children only that are concerned—the general public is involved.
>
> The situation is a simple one, but full of reasons for anxiety and solicitude. Our public schools have been determined by the surest tests to be centers of infection of dangerous diseases.
>
> The laws of Connecticut compel the exposure of our well children to incur this serious risk. Do not the dictates of humanity demand that immediately a life-saving service be organized and established? The most effective means of safety known is a daily systematic medical inspection of all the schools and the exclusion of such pupils as have contagious diseases until they recover.

DISTRICT OF COLUMBIA.

Bequest to Hospital.—By the will of Anna D. Mansfield of Washington, $5,000 is bequeathed to the Episcopal Eye, Ear and Throat Hospital, to be known as the Charles Davies Mansfield Memorial Fund, to maintain a bed in the hospital.

Well-Known Anatomist Dies.—Adolph J. Schafhirt, for many years an employe of the Army Medical Museum, an expert anatomist and preparer of sections and specimens, and a frequent contributor to medical literature, died at his home in Washington, September 14, aged 62.

Under New System.—On October 1 the Emergency Hospital and Central Dispensary, Washington, was placed under the entire charge of a male medical superintendent, who is in fiscal and professional control of the affairs of the institution. Dr. Charles S. White, Washington, is the first incumbent under the new system.

New Filtration Plant.—By the aid of a congressional appropriation of $3,500,000, Washington is installing a filtration plant on land 35 acres in extent, on which filtration beds are being constructed. There are 29 distinct reservoirs, into each of which the water is filtered through beds of clean sand. When the sand becomes polluted, the water is cut off from that particular division and the sand taken out and cleansed. The beds are thus renewed in rotation, 4 of the 29 being always in process of cleaning. An article describing the filtration system of water purification appears on pages 850 to 852 of this issue of The Journal.

ILLINOIS.

Aged Physician Injured.—Dr. David R. McKinney, Gifford, fell from a train near Fithian, Ill., September 16, breaking his left leg and right arm.

Grant's Home a Hospital.—General Fred D. Grant, and his brothers and sister, wishing to preserve the Grant homestead in Galena, have presented it to the city and it will probably be converted into a hospital.

Oglesby Hospital Incorporated.—Oglesby Hospital Association, Decatur, was incorporated September 2, the purpose being to establish and maintain a hospital ward for the sick and helpless veterans of the Civil War.

Hospital for Children.—The Cook County Board has instructed the county architect to draw up plans and specifications for a hospital for children on ground adjoining Cook County Hospital, the expense not to exceed $50,000.

Combination of Dental Schools.—The College of Dental Surgery of Chicago has been merged with the dental department of the University of Illinois. During the present college year both schools will be continued and the usual courses given.

Personal.—Dr. Lewis D. Dunn and wife of Moline entertained the physicians of Moline, Rock Island and Davenport, September 18, the occasion being Dr. Dunn's birthday anniversary. Dr. Peter H. Wessel, on behalf of the guests, presented Dr. Dunn with a chain and locket.

Sanitary Condition of Cities.—Late in August the State Board of Health began a systematic investigation of the sanitary conditions of all towns in the state of 2,000 or more inhabitants. It is the intention of the board that an inspector shall personally visit each city and confer with the health officer or the board of health and also with the local physicians; inquiring into unsanitary conditions, investigating the system of sewerage and water supply and making such recommendations and giving such advice as may be found necessary. It is the intention also to have a careful chemical and bacteriologic analysis made of all public water supplies. The analyses will be conducted in Chicago under the direction of Professor Long, chemist of the board. The administration of the act to regulate the practice of medicine will also receive the attention of the inspectors, as well as the administration of the birth and death law of 1903. Dr. E. F. Baker, inspector of the State Board of Health, handed in a report, September 22, of his investigation of the sanitary conditions in the cities of Quincy, Pittsfield, Virden, Belleville, East St. Louis, Alton, Jerseyville, Collinsville, Edwardsville, Madison and Litchfield. He reports the sanitary conditions in each city to be good, with the exception of Edwardsville, where a large ravine exists, into which the sewage of the city empties. This was found to create a bad condition of sanitation, and the authorities were asked to remedy the matter, and promised to do so.

Chicago.

Personal.—Dr. L. Harrison Mettler has been appointed consulting neurologist to the Norwegian Lutheran Deaconess Home and Hospital.

Acquitted.—Dr. Ladislaus Slominski, who was held to the grand jury on the charge of performing a criminal operation, has been exonerated by the grand jury.

Fined for Speeding.—Dr. Leonard L. Skelton, whose automobile is said to have injured a man, was fined $10 and costs by Justice Doyle for exceeding the speed limit of the West Park ordinance.

Cornerstone Laid.—Mrs. Helen Barker, treasurer of the National Woman's Christian Temperance Union, laid the cornerstone of the Frances E. Willard National Temperance Hospital, September 28.

Deaths of the Week.—During the week ended September 26, 498 deaths were reported, equivalent to an annual mortality of 13.76 per 1,000. Acute intestinal diseases caused 61 deaths; consumption, 45; violence, 46; heart disease, 41; Bright's disease, 34, and pneumonia, 32.

Early Medical Chicago.—The city of Chicago has been celebrating its centennial during this week. One hundred years ago the United States sent some soldiers to the spot where Chicago now stands, and they built a fort, which was called Fort Dearborn. The building of this fort in 1803 was the foundation of the city of Chicago. The first physician of record in Chicago was John Cooper, a surgeon's mate from Poughkeepsie, N. Y., who entered on his duties at Fort Dearborn, Dec. 31, 1810. He was succeeded by Dr. Isaac Van Vorhis, also from Dutchess County, N. Y. He was killed in the Fort Dearborn massacre, Aug. 15, 1812. The first civilian physician was Dr. Alexander Wolcott, who was also Indian Agent at Fort Dearborn in 1820. Ten years later Dr. Elijah D. Hamon came to Chicago and entered private practice, also acting as post surgeon. He was in charge of health matters when cholera was brought to the city by the United States troops in 1832. The first medical college—Rush—was incorporated in 1837, but lectures were not given until Dec. 4, 1843. A year later the first medical college building was erected at Dearborn Ave. and Indiana St., the present location of The Journal, and the first course of lectures commenced Dec. 11, 1844. The first medical society was the Cook County Medical Society, whose initial meeting was held Oct. 3, 1838, Dr. Levi D. Boone being secretary. The first general hospital was established in a portion of the old Lake House at Rush and South Water Sts., in 1850, with 12 beds. As those who had promised to support the hospital failed, the hospital was turned over to the Sisters of Mercy on the condition that it was to be undenominational and that clinical facilities be offered to medical students. The City Hospital was established at La Salle St. between Cross and Old Sts. in 1856, and was opened in November of the next year with a capacity of 300 beds. The first city board of health was appointed in 1834 and consisted of Drs. William Cluet and Edmund S. Kimberley.

The first directory of Chicago was published in 1844, at which time Chicago was a rapidly growing town of 7,000 inhabitants. This directory contains the cards of twelve physicians, practically all who were practicing in the town, showing that even in 1844 physicians in small towns did not disdain to advertise. The following cards will illustrate the style:

V. A. BOYER,
PHYSICIAN AND SURGEON,
JUSTICE OF THE PEACE.
OFFICE.—CLARK ST. nearly opposite the City Hotel.

DOCTOR BLANEY,
Professor of Chemistry and Materia Medica,
IN RUSH MEDICAL COLLEGE,

May be consulted professionally, at his office, on Clark Street, near South Water St. Dr. B. will also attend to CHEMICAL ANALYSIS, in all its branches.

DANIEL BRAINARD, M.D.
PROFESSOR OF ANATOMY AND SURGERY,
In Rush Medical College,
Office on Clark St. Opposite the Post Office.

DOCTOR H. H. BRAYTON.
Having established his residence permanently at
CHICAGO,
Respectfully tenders his professional services to the inhabitants
of the City. Twenty-five years' Study and Practice,
and constant application to professional duties, he
hopes will entitle him to the confidence of
those who may demand his Services.

FRESH VACCINE VIRUS
Now, and always on hand. Office & Residence
On the East side of CLARK ST. first door South of the
Methodist Church.

DOCTOR J. BRINKERHOFF,
Office Clark Street, Opposite Public Square.
DRUG STORE, 143 LAKE ST.

DOCTOR EGAN
Can be consulted in private cases at his Residence or Office, but
cannot attend to out-door practice.

M. L. KNAPP, M.D.
PROFESSOR OF OBSTETRICS, &c.
In Rush Medical College, Chicago,
May be consulted professionally at the Mansion House,
NO. 82 LAKE STREET.

The cards of a homeopath, Dr. R. E. W. Adams, and of Drs. John W. Eldridge, Benjamin F. Hale and D. S. Smith also appear.

And at this early day the quack was there:

PHRENOLOGICAL AND MAGNETIC EXAMINER,
At His Residence, 2nd House N. of the Ep. Church,
DR. TEW,

MAY be consulted in all cases of Nervous or Mental difficulty.—The application of his Remedies will enable him to relieve, or cure, any case of Monomania, Insanity, or recent Madness, where there is no inflammation or destruction of the Mental Organs. His attention to the diseases of the Nervous System, such as the St. Vitus' Dance, Spinal Affections, has resulted in some remarkable Cures. Having been engaged, for the last five years, in teaching Mental Philosophy, as taught by Phrenology, together with his numerous Phreno Magnetic Experiments, enable him to give correct and true delineations of Mental Dispositions of different persons; which will be every way profitable to all who wish to understand the mysteries of their own natures, and how they may use their talents to the best advantage.

The announcement of Rush Medical College in the directory referred to gives the faculty as consisting of Danial Brainard, M.D., Professor of Anatomy and Surgery; James V. Z. Blaney, M.D., Professor of Chemistry and Materia Medica; John McLean, M.D., Professor of the Theory and Practice of Medicine; M. L. Knapp, M.D., Professor of Obstetrics and Diseases of Women and Children, and A. W. Davisson, Prosector to the Professor of Anatomy. The name of E. S. Kimberley, M.D., also appears on the list of trustees. It is announced that "the annual course of Lectures for the first session commences on Monday, December 4, 1843, and will continue sixteen weeks"; that "the requirements for graduation are three years' study with a reputable physician, two courses of lectures, one of which must be in this institution (or two years' practice will be received in lieu of one course). The candidate must be 21 years of age, of good moral character, must present a thesis on some medical subject of his own composition, and in his own handwriting, which shall be approved by the faculty; and pass a satisfactory examination on all the branches taught in this college." In conclusion, it is stated that "Good board and room can be obtained in Chicago at from $1.50 to $2 per week." Happy times now past!

INDIANA.

College Opens.—The Central College of Physicians and Surgeons, Indianapolis, opened for its twenty-fifth year, September 22.

Much Typhoid.—For the first half of September 56 cases of typhoid were reported in Indianapolis, two more than for the corresponding period of last year. The board of health is actively examining well water, and condemning wells.

Personal.—Dr. C. Homer Stalker, Borden, has been appointed assistant physician at the Indiana State Soldiers' Home, Lafayette.——Dr. A. Grant S. Brubaker, Indianapolis, was thrown from his buggy, September 12, and severely bruised.——Dr. Bruce Easley, New Albany, has gone to Europe.

Deplore Hibberd's Death.—The City Council of Richmond met in special session, September 10, and passed resolutions *eulogistic* of the character of Dr. James F. Hibberd. The Allen County Medical Society held a special meeting at Fort Wayne, passed resolutions and deputed Dr. Miles F. Porter to represent the society at the funeral.——The Wayne County Medical Society passed resolutions eulogistic of "its most distinguished member."

LOUISIANA.

Illegal Practitioner Enjoined.—The State Board of Medical Examiners secured an injunction against "Dr." D. O. Holmes, 1306 Magazine St., New Orleans, restraining him from practicing medicine in Louisiana, on the ground of his being an "illegal practitioner."

Typhoid Reports Requested.—The City Board of Health has issued a circular letter to the physicians of New Orleans urging their co-operation in tracing the sources of typhoid infection, and reminding them that it is their duty under the law to report all cases of typhoid fever. The health officer states that a death certificate is often his only notification.

Asylum Overcrowded.—The State Insane Asylum, which has a capacity for about 1,200 patients, now contains 1,353, and more than 100 applications are on file. Owing to the congested condition of the dormitories it has been necessary to place cots in some of the corridors formerly used as sitting rooms. To relieve this congestion, an insane asylum for colored persons is being built at Pineville, Rapides Parish, which will accommodate about 450 patients.

Alarming Increase of Insanity.—In speaking of the increase of insanity throughout the country, Dr. G. A. B. Hays, superintendent of the State Insane Asylum at Jackson, says that he had recently visited Missouri and Texas and found that the situation was as bad as in Louisiana. Both these states have several asylums and each is having a new one erected. From this fact Dr. Hays contends that the conditions now obtaining in Louisiana are not peculiar to that state alone but are simply an expression of a state of affairs that is widespread throughout the country.

Prisons for Insane Criminals.—There are a number of criminals who have been adjudged insane, confined in the Louisiana State Insane Asylum. The superintendent thinks that this class of insane should be held in some specially-prepared portion of the state prison, where they could be placed under proper treatment and at the same time have the possibility of escape minimized. Not long ago one of the assistants at the asylum narrowly escaped death at the hands of one of these men. The handling of these patients should be the subject of special attention.

Cottages for Insane Consumptives.—Dr. G. A. B. Hays, superintendent of the Louisiana State Insane Asylum, suggested to the board of directors of the asylum that two cottages be erected for white consumptives now in the asylum, one for each sex. The matter was favorably considered by the executive committee and will be submitted to the board at its meeting October 5. The matter of sequestering the insane suffering from tuberculosis is one that has been acted on in a number of asylums in other states, and it would greatly alleviate the lot of the unfortunate inmates if the plan is carried out in Louisiana.

MARYLAND.

Personal.—Dr. Walter Hutchins, My Lady's Manor, Md., has gone to New Mexico for his health.

Typhoid Investigation.—Health Officer Dr. Christian R. Scheller, Hagerstown, is investigating the cause of the epidemic of typhoid fever at Clear Spring, Washington County, where 31 cases are reported.

A Nuisance.—Dr. F. A. Ruhl, sanitary officer of the Thirteenth District, Baltimore County, has reported the Claremont Chemical Company's plant at Sextonville a nuisance and "dangerous to health." "Inhaling of the dangerous gases lowers the vitality of the body and causes headaches, nausea and irritation of the respiratory organs."

Baltimore.

College Opens.—The twenty-third annual session of the Baltimore Medical College opened September 24 with an address by Prof. J. Frank Crouch.

Death and Disease.—The number of deaths for last week was 171, an annual death rate per 1,000 of 15.80. The chief causes of death were consumption, 30; cancer and cholera infantum, each 11; Bright's disease, 10; pneumonia, 6, and typhoid fever, 4. The most prevalent epidemic diseases were diphtheria, scarlet fever and typhoid fever; one case of smallpox was reported.

Personal.—Drs. Howard Kelly and William Osler returned home last week.——Dr Harry M. Hurd is spending his vacation in the Blue Ridge Mountains.——Dr. John T. King has returned from a trip abroad.——Dr. Charles Lewis Allen, formerly connected with Georgetown University Medical School and Vanderbilt Clinic, has been made lecturer on nervous diseases in the University of Maryland.——Dr. Alan Welch Smith has located in Portland, Ore.

PENNSYLVANIA.

Philadelphia.

New Buildings Opened.—New buildings containing operating rooms and an amphitheater were recently opened at the Samaritan Hospital.

Bequest to Hospital.—The late Samuel Cummings left an estate of $40,000 bequeathed to his widow, which, on her death, is to be equally divided among four institutions, the Methodist Episcopal Hospital being one of the four beneficiaries.

One American Selected.—The International School of Hygiene has selected one man from each country in the world as a representative. Dr. J. K. Shell of Philadelphia is invited to represent the United States at the next annual conference at Güttenburg, Germany, next fall.

Woman's College Opens.—At the opening of the Woman's Medical College, September 23, it was announced that to fill vacancies in the faculty Dr. Edith Womer Cadwalader had been elected professor of obstetrics and Dr. Ruth Webster professor of physiology and hygiene. The chair of anatomy made vacant by the death of Dr. William H. Parrish will not be filled this year.

Poisoning Case.—In the trial of Emma Williams, charged with poisoning her children, several medical experts have testified that the children died with symptoms of arsenical poisoning. The chemical expert testified to finding several grains of arsenic in organs examined. One line of defense announced is that the children were poisoned by "spit balls" which they made of wall paper. An effort has been made to show that the colored herb "doctor" Hossey supplied the poison to the accused.

Appeal for Jefferson.—Hon. William Potter, president of the board of trustees of Jefferson Medical College, in his introductory address on September 24, made a strong appeal for the benevolence of the wealthy in behalf of his own and like institutions concerned in the saving of human life. While great liberality has marked the giving to libraries and other institutions of learning, gifts for the endowment of medical schools have been strangely meager. President Potter spoke in high terms of the Jefferson Hospital now building, and announced the purchase of properties in Walnut street, where it is proposed to erect a nurses' home.

The Typhoid Epidemic.—For the week ended September 26 there were 81 new cases of typhoid fever. The health authorities who have been energetic in their efforts to find the source of infection in sections of the city where the disease has been almost epidemic—districts supplied with filtered water—have, they believe, found the true sources. In addition to infected milk supplies, it has been discovered that a well and a spring from which many secured their drinking water are contaminated. While the typhoid bacillus was not detected in the water, it was found to contain the colon bacillus and other impurities, indicating contamination from cesspools. Eighteen new cases of smallpox were reported for the week.

GENERAL.

Yellow Fever Close to Texas.—One case of yellow fever was reported from Laredo, Mexico, last week, which is just across the Rio Grande from Laredo, Texas. The number of guards patroling the river has been increased and all communication between the cities stopped. A case is again reported from Monterey and again denied. United States officers say the truth is hard to obtain. In Victoria only a dozen cases now exist, and the authorities think they will soon have the disease stamped out. Tampico now has seven cases weekly, and the number is diminishing. War against the mosquito is carried on.

FOREIGN.

Police Regulations in Prussia Against Hypnotism Exhibitions.—The Prussian authorities have cautioned the police against allowing any exhibitions of magnetizing, suggesting or hypnotism or any such measures.

Pasteur Treatment of Hydrophobia at Rome.—The mortality among the patients treated at this institute, which is in charge of Professor Celli, has been only .5 per cent. since its organization in 1899. During this period 2,000 persons have received treatment, averaging about 38 a month.

The Sanatorium Movement in Denmark.—The National Antituberculosis Association was founded in Denmark two years ago, and has now 30,000 members. A model public sanatorium has been just opened at Silkeborg, the first in the country. It has accommodations for 122 patients, with 112 rooms facing the south. Each patient has a minimum of 900 cubic feet of space.

Quinin in Italy.—All the provinces of Italy now have quinin bisulphate for sale everywhere, standardized by the government and sold at the postoffice in places without a drug store. The maximum price allowed to be charged is about two and a half cents a gram, and the charitable organizations are supplied with it to be distributed gratuitously among the poor in the most malarial regions.

False Testimonial Ends Insurance Benefit.—A German manufacturer was in regular receipt of an indemnity paid by a sickness insurance company, on account of a serious stomach trouble. He recently applied to a charlatan, and in order to obtain a reduction in the charges of the latter signed a certificate to the false effect that he had been entirely cured of his stomach trouble after a week's treatment. This certificate was published in the charlatan's ads with the consequence that the insurance company naturally at once suspended further payment of the indemnity.

Popularizing Medical Lore in Russia.—The St. Petersburg Red Cross Society has inaugurated a two years' course of instruction of laymen in the principles of hygiene, disinfection, massage, emergency operations, internal, venereal and cutaneous affections, surgery, etc. The practical demonstrations will be given in a military hospital, and in some of the city public hospitals. The aim of the course is to disseminate information among the people in regard to the onset and care of disease, and diplomas will be conferred on those who complete the course. Our medical exchanges regard the project with disfavor, fearing that the smattering of knowledge thus gained will be an incitement to enter the ranks of the charlatans.

The Anti-Seasickness League Ship for the Lisbon Congress.—The Ligue contre le Mal de Mer chartered a vessel on the occasion of the International Congress at Moscow in 1897 and conveyed a number of members of the congress from England to St. Petersburg and return. The league now proposes to have a ship in readiness for the International Medical Congress at Lisbon in 1906. The vessel will start from Hamburg and touch at intermediate ports, taking the members after the congress to the Mediterranean European ports It is proposed to install in the vessel a complete exposition of everything bearing on the subject of the prevention of seasickness, and to institute experiments on the passengers on request. The permanent address of the league is Ligue contre le Mal de Mer, Paris V, Boulevard Porte Royale 82.

The Syphilized Chimpanzee.—It is announced from Paris that the chimpanzee successfully inoculated with syphilis this summer now presents the symptoms of the secondary stage. When Metchnikoff and Roux exhibited the animal at the Académie de Médecine, July 28, the primary chancre was recognized as specific by Fournier and others, and the eruption, swollen glands and enlargement of the spleen are now likewise qualified as specific by experts, as Metchnikoff proclaimed at one of the meetings of the International Congress of Hygiene and Demography, which has just closed its sessions at Brussels. Attempts to inoculate other monkeys from this animal—selecting those a degree further removed from man—have proved negative. It seems to be established by this research that the anthropoid apes alone are susceptible to syphilis. The previous communications on the subject were reviewed in THE JOURNAL, page 752.

Crusade Against Tuberculosis in Buenos Ayres.—Stringent measures have been enacted in Buenos Ayres and a penalty of about $192 is enforced for every householder who neglects to comply with the regulation that every house in which a tuberculous person has passed even a single day is to be regarded as infected and disinfection required. Spittoons are to be placed in all public places holding carbolized water renewed twice a day and a penalty of $2 to $5 enforced if a person spits elsewhere than into the receptacle provided. Spitting on the floor of street cars is punished by a fine of about $10; the police are instructed to enforce these regulations. Public vehicles must be thoroughly disinfected twice a year and their floors twice a week. Cars must be disinfected with formalin once a month. No tuberculous person is to be allowed to serve as waiter, cook, butcher or deal in any way with articles of food. Repetition of an offense entails a double penalty.

Cancroin in the Austrian Hospitals.—When Adamkiewicz first presented his cancroin for the treatment of cancer, Albert and Billroth offered him every opportunity in their clinics to prove its efficacy. After the most thorough tests and long experience they concluded that the remedy had no curative action nor power to arrest the disease. Their verdict has not been contradicted in the medical world during the ten years since, but the minister of the interior has recently notified the public hospitals throughout the empire that cancroin must be now given a thorough and objective testing, and a special ward for the treatment of cancer by this method is to be established in some hospital and placed in charge of Adamkiewicz. Our Austrian exchanges comment, as might be expected, on this innovation, which is such a contrast to the usual lethargy in regard to medical matters on the part of the administration—"usually it requires years of red tape before a university, to say nothing of any special faculty, is able to obtain a microscope or even some needed washstand, and every request for some of the modern, well-tried remedies always meets with the reply that the testing of new drugs is not in the province of the hospitals." The Austrians have been chagrined lately over the refusal of a number of prominent German professors to accept the chairs left vacant at Graz, Innsbrück and Vienna by the death or retirement of eminent men. One after another declined as the chairs were offered to them.

International Congress of Hygiene and Demography.—September 2 to 8 witnessed the gathering at Brussels of the eleventh international congress of hygiene and demography, the semi-centennial of such assemblies. There were 1,900 registered members, and 500 were delegates from various countries. The congress was a model of perfect organization we are told. More than 100 sessions were held in all, and each discussion occurred at the time and place as planned from the outset. Among the resolutions adopted was one favoring preventive antidiphtheria treatment and tests of the antimicrobian strength of the antitoxin as well as its antitoxic power. Another resolution adopted was to the effect that "infant consultations" under the care of physicians should be established, and that young girls should be given practical instruction in the hygiene of infants, visiting the "consultations," etc. Circulars proclaiming that bottle feeding can never take the place of breast feeding should be given with the marriage license and when a birth is declared. A number of resolutions were voted in regard to school hygiene and prophylaxis of the plague, among them one to the effect that quarantine against the plague should be abandoned when possible to substitute close surveillance for ten days, reducing it to five days if the passengers consent to prophylactic inoculation with antiplague serum, even when cases of plague have occurred on the vessel during its trip. Ships touching at infected ports should be supplied with antiplague serum so that passengers and crew could be vaccinated when plague occurs on board. The physicians entrusted with the prophylaxis of the plague should be appointed by the central powers, independent of the navigation companies. In regard to tuberculosis, the resolutions were based on the principle that it is eminently a social disease. In the section on demography the statistics presented confirmed the fact that infantile mortality is mainly during the first year, and Bertillon pointed out that 90 per cent. of the infants succumb to a microbian affection, and that the aim should be to treat infants with the same care with which a wounded person is tended. The pressing need is for the mothers to be educated in the principles of asepsis. The section adopted a resolution urging that the accessory circumstances should be recorded with the births, including the premature and the stillborn. The next congress will be held at Berlin in 1907, a national congress of hygiene at Marseilles in 1904, a congress of physical education at Geneva in September, 1904, and a section on hygiene will be one of the features of the international and universal exposition which Liège is preparing for 1905.

Correspondence.

The Danger of Methods Often Used at Present in Dusting Waiting Rooms, Cars and Other Public Places.

BALTIMORE, Sept. 21, 1903.

To the Editor:—The day before yesterday on my return from the Parry Sound District in Canada, at the close of a long holiday, I was delayed for about an hour in the Pennsylvania railroad station at Harrisburg. It was in the small hours of the morning, and being weary I nodded and fell asleep for awhile as I sat on the bench, only to be suddenly awakened with a stifling, gasping, choking sensation caused by thick clouds of dust raised by two sweeping men who were vigorously plying their brooms and stirring up all the desiccated filth deposited on the floor by the great continuous traffic of the previous day and night. The waiting room was crowded, late as it was, and all who remained in the room were forced to breathe the pulverized debris which had been tracked in from the streets, mingled with the dried expectorations of hundreds of men, women and children of the preceding day.

I need not argue so transparent a case with any intelligent medical man, nor need I dwell on the variety of infectious diseases of the respiratory passages, coryza, bronchitis, whooping cough, pneumonia, tuberculosis, as well as diphtheria, etc., etc., which are at present disseminated over the length and breadth of our land, day by day, by just such atrocious death and disease-dealing procedures, which sin against the simplest and best-known laws of hygiene.

As for myself, although in splendid health ever since I left this country for Europe on April 10 last, I developed immediately a fever and a wretched cold in the head, which is traveling down through my larynx, producing a cough and almost completely unfitting me for work for a few days.

My object in writing this letter to The Journal is to enlist the entire medical profession as a committee on the whole to expostulate in strong terms, to insist, to write vigorous letters to the daily papers if needs be, or even perchance to be almost ready to resort to personal violence to put a stop to such atrocious practices.

I want my confrères to note the great prevalence of this practice of atomizing the dried filth of our streets and forcing people to inspire it, in many public institutions, in hotels, and in Pullman cars. I am sure it must have long been an offense to many decent clean men to be obliged to submit to breathe the dust thrown in their faces by the currents of air raised by the whisk broom of the Pullman porter as he belabors the coat, the trousers, the hat and the overcoat of the next dusty passenger. Dr. McCormack tells me that the street cars of Baltimore are cleaned by a woman, who enters the car when it goes into the shed and raises clouds of dust with her duster, much of which settles in the upper parts of the car. The car then goes out, and as it jumps over the rails the light dust descends to be inspired by the passengers.

In spite of the general corrupt political state of our country I think a continued vigorous protest from the countless thousands of natural guardians of the public health, my brethren of the medical profession, would soon effect a radical change in the methods of removing and collecting dust and filth from floors and clothes, as it appeals so directly to the selfish instinct of self-preservation.

Let me ask this pertinent question: What right have you or I, my medical brother, to be longing for the dawn of a new era in medicine when we shall be in possession of a toxin for every disease, for tuberculosis and for kindred ailments, so long as we fail to utilize the far better and simpler efficient methods of preventing disease which we already have at hand, when, for example, such a city as Philadelphia, once noted for its cleanliness, becomes conspicuous for its filthy streets, when in our homes, in our streets, in our public places, that most modest of all virtues, cleanliness, holding in her beneficent hands a reduction of the morbidity and of the mortality of so many of the scourges of our modern "civilization," to a point far below 50 per cent. of its present ratio, when cleanliness, I say, is unknown? Must we have magic to please our people? Must the remedy be a poison manufactured in a dramatic way and injected into the veins of the disease-stricken patient, in order to arouse our languid interest?

We put the whole noble army of bacteriologists to utter blushing shame when, as a result of all their arduous labors, they give us such a preciously simple remedy, when after having explained the causes of many of our most frightful diseases in a manner so simple that a child in a kindergarten can both understand the method of invasion and apply the remedy; we shame them I say when, after having thus done all the most sanguine imagination could have proposed, we dumbly plod along the same old dusty, dirty road, waiting to crown the discoverer of an antitoxin.

The specialist in disease of the lungs, throat and nose may exclaim that these are but trite observations, the very A, B, C of his science, iterated and reiterated in medical society meetings. But I care not how old the observation is or how often repeated if men do not heed it. And of one thing I am certain, and that is that the dormant medical profession at large is the proper police body to take the body politic by the throat and shake it out of its disgraceful lethargy.

A distinguished president of one of our great universities told me some ten years ago that he had joined an association known as "the kicking society," the members of which were obliged to object every time they saw gross violations of the law and injustice done.

Let us constitute then a kicking society from Maine to California and insist on clean streets, clean houses, clean public buildings, and clean cars. Let it be recognized as a grave offense and an insult to force a neighbor to inhale myriads of pathogenic germs. The primary inviolable right of every man is to pure air and pure water and sunlight when the sun is shining. See, my brethren, that he is not robbed of his rights. Howard A. Kelly, M.D.

Mental Status in Phthisis.

New York City, Sept. 14, 1903.

To the Editor:—Under the above title a correspondent in The Journal of the American Medical Association, August 29, p. 767, asks two questions concerning the mental condition of patients with pulmonary tuberculosis. May I, by reason of a somewhat extensive experience with phthisical patients, be permitted to reply and start a discussion, trusting that the interesting subject may cause others, specialists in phthisiotherapy, and particularly general practitioners, to express their opinions through the medium of The Journal?

The family physician more than anyone else should be heard from on this subject, for he must of necessity be more familiar with the psychologic and mental condition of the members of a family which he has attended for years, than the specialist or consulting physician could be.

The first question was: "Are persons who are afflicted with pulmonary consumption prone to attribute their physical weakness to some other cause than consumption?"

Yes, many consumptives are apt to do so, but the reason for this is not a condition brought about by the disease itself, but by the fear of the disease. Invalids know that many people will shun, or wish to shun them if they are called consumptives. Many still consider phthisis an incurable disease, and try to delude themselves, their families and friends as long as possible, feeling that to pronounce them consumptives would be to sign their death warrant. Others have no suspicion of their true condition and are sure they have no tuberculous disease. Thus I have not infrequently seen consumptives, even among the most cultured and educated, who would ascribe a hemorrhage from the lungs to a little bleeding from the throat or nose; the cough to bronchitis or to a derangement of the stomach; the pleuritic pains to intercostal neuralgia or heart trouble; their general weakness to an overtaxing of the nervous system. I have even found medical men suffering from tuberculosis who believed their symptoms were due to anything and everything else except to the development of a typical pulmonary phthisis.

Whether and when it is wise to leave the patient under these delusions will largely depend on the state of mind of the individual invalid and the good judgment of the physician. At times I have found it best to dispel all such illusions at once; in other cases it was necessary to proceed gradually and with the utmost tact. In view of the infectiousness and the curability of the disease under proper care the patient should, as a rule, be made acquainted with his true condition as soon as possible. If he is told that he will get well quicker if he calls his disease what it is and takes proper care, than if he calls it something else and neglects it, he will have more courage, be in a better mental condition and will then be careful not to infect others or reinfect himself.

The second question was: "Are persons afflicted with pulmonary consumption more easily turned against their dearest friends by designing people than when in a normal state of health?"

I would answer this strange query with a most emphatic

"No." If such instances occur they are the exception, not the rule, and are then due to a peculiar psychologic state of the individual. Consumptives as a class are grateful to their friends, physicians and nurses and devoted to their families. At the beginning of the disease, it is true, a decided irritability may often be noticed, with a dislike or indifference to pleasure or work; but beyond this no distinct psychologic changes can be observed. Many consumptives are very sanguine about the outcome of their disease, others are depressed, some totally indifferent. Even in the case of a fatal termination most of them retain a clear intellect until the last. The character and disposition of the consumptive varies as it does in well people; but to say that by reason of his disease he is easily turned against his friends by designing people would be absurd and do him the greatest injustice.

There is enough phthisiophobia in the world already, and let us not give the phthisiophobic another cause to increase his fear of or dislike for the unfortunate consumptive. Thousands of these are as noble, true and generous as any other class of invalids or well people.

Consumption is a preventable, curable, communicable, but by no means a dangerously contagious disease. Among those who were once afflicted with it and were ultimately lastingly cured we count the brightest minds, the most generous and truest hearts. The German poet Goethe, our own Peter Cooper, the French poet Coppée, were among them. The greatest German specialist Herman Brehmer, who cured himself, and thousands of others from this disease; his two greatest contemporaries and co-workers, still alive and active. Dettweiler in Germany and Trudeau in this country, all are examples of the highest type of men. The story of the lives and work of those who have passed on and those still with us give evidence of their great qualities of heart and mind, their truth and devotion to friends, family and mankind in general.

16 West Ninety-fifth Street. S. A. Knopf, M.D.

Suggestive Therapeutics vs. Hypnotism.

Chicago, Sept. 26, 1903.

To the Editor:—In The Journal, Sept. 26, 1903, appears an editorial under the above heading, which challenges some comment. . . . Hypnotism, as now understood by men who have had personal experience with it, is really synonymous with suggestion. The Charcot school is responsible for the term artificial hysterical state occasionally cropping up in medical literature. Charcot conducted his experiments with hypnotism on about a dozen or more hysterical patients which were demonstrated to the whole world in order to prove his theories. The peculiar method used and the frequency with which these patients were hypnotized contributed toward their becoming perfect automatons of unconscious suggestion. Hypnotism as practiced now is nothing else but suggestion administered during a state of greatest susceptibility to suggestion. I can not conceive how you can recommend suggestive therapeutics and condemn hypnosis when to successfully practice the first the second is often an absolute necessity. Not all people are alike suggestible and particularly are hysterical patients refractory to suggestions from without, for they are mostly dominated by autosuggestions. If suggestion is to be of value it must be administered during the time of greatest susceptibility. Many people are susceptible to suggestion in the waking state and these are the proper subjects for indirect waking suggestions by means of innocuous drugs, electricity, etc. In some cases we are forced to place such patients into the condition of greatest receptivity for our suggestions, I mean into hypnotism. The so-called dangers from hypnotism are imaginary, and although I have hypnotized hundreds of times I have never seen any ill effects from its use. Bernheim, Liebault, Ford, Wetterstrand and a host of others who practiced hypnotism thousands of times have had similar experiences. Because of the Mendel commission having assumed an unfavorable attitude toward hypnotism is no valid argument against its use by the physician in properly-selected cases.

Julius Grinker, M.D.

Physiology in the University College of Medicine.

Chicago, Sept. 28, 1903.

To the Editor:—My attention has been called to the fact that in my report on Curriculum in the National Confederation of State Medical Examining and Licensing Boards (The Journal, Aug. 15, 1903, pp. 456-461), the University College of Medicine, Richmond, Va., is not credited with any work in physiology. This college devotes to this study 53 hours of lectures and 27 hours of recitations. I am informed by the proctor that the number of hours has been increased for the coming session. Any other errors noted in the above report will be corrected most cheerfully if sent to the undersigned.

70 State Street. George W. Webster, M.D.

The Visiting Physician in Berlin.

by DENSLOW LEWIS, M.D.

CHICAGO.

(*Concluded from page 798.*)

With a slight knowledge of social usage and with the ability to speak the language to a reasonable extent, the American visitor's sojourn in the German metropolis will be most enjoyable and profitable. The wealth of clinical material is unsurpassed elsewhere, and the sensible manner in which it is utilized will be appreciated. The friendly reception extended to Americans and the invariable courtesy that prevails on all sides combine to make the visitor welcome and to facilitate his studies. The months of April and August are vacation months when many medical men leave town. The months of March and October are also vacation months, but especially valuable to the medical visitor for the vacation courses (*Ferienkursen*) are given at this time. These courses are unusually interesting, for it is here that the younger teachers have a chance to exploit themselves and the older men to bring forward prominently special points in diagnosis and treatment. The cost is insignificant. For ten dollars a month you can see Lexer and others connected with Bergmann's Klinik perform major operations every morning, and you can do minor operations yourself in the Poliklinik, where over 20,000 patients are treated every year.

If one's stay is to be protracted it is well to matriculate and be enrolled as a student. It is imperative to show a passport, and it is customary to present the diploma. I had forgotten to bring either, but I procured the passport from our Embassy for about ten marks and I showed the dean a copy of my "Obstetric Clinic" I had with me to give to Olshausen. In arranging to matriculate consult the man in charge, called the "*Pfoertner*," or better still, his wife, who is an English woman. They keep the buffet in the university building and supply the student with information as well as sandwiches and drinks. They told me the day and hour I was expected to appear in person and qualify.

When the appointed time arrived I found myself, together with some fifty others, seated in the "*Aula*," as the assembly hall of the university is called. At one end of this hall is a throne or pulpit arrangement with leather chairs in front and seats along each side of the room. I learned afterward that this is where the candidate for graduation takes leave of the university by publicly defending three theses before all the world—a function known as "*promovieren.*" At the other end of the room is a large table at which are seated several dignified gentlemen who superintend the matriculation. When my name was called I approached the table and was interviewed by the gentleman at the end. He looked at my passport and compared the name with the name in my book on obstetrics. Being satisfied apparently with my credentials, I was directed to the rector, who wrote my name and his own on a large Latin document, which I deciphered later and learned that it was my certificate of matriculation. I then passed along to another gentleman, who had me write my name and address in a large book. The next gentleman had me write my name on a numbered student's card, which I was instructed always to have on my person and which, I learned afterward, exempted me from arrest or interference by the police. The next gentleman, who is the *"Ober-Pedell,"* collected eighteen marks and gave me my *"Anmeldebuch,"* in which to record the lectures attended. I went back to my seat and waited until all present had similarly run the gauntlet. Then the rector arose and made a short speech. He said we had all done well at our high schools and he hoped we would do equally well at the university. He admonished us against the temptations of the metropolis, and we formed in line and marched past him so that each one could receive from him the academic handshake. The medical students were directed to meet the dean the next day at a stated hour, on which occasion, by showing our student cards and matriculation certificates, we received another Latin document of smaller size, which indicated that we were inscribed as students of medicine.

The next thing to do is to decide which lectures are to be chosen, or, as here expressed, *"belegt."* You must choose at least one course or your name does not appear in the catalogue. You have the first six weeks of the semester in which to look the field over and make a decision. During this time you visit the different men, hear them teach or see them operate. This is called *"hospitieren."* Having made your choice you visit the *"Questor"* at the university building between the hours of 9 and 1, and in addition to paying for the courses you select you pay also twelve marks and a half each semester for incidentals, including free medical attendance in case of illness or accident. The amount paid and the courses chosen are written in the *"Anmeldebuch,"* which must be taken to each professor for his signature at the beginning and end of each semester. When leaving the university a certificate of attendance called an *"Abgangszeugniss"* can be procured by the payment of twelve and a half marks and the presentation of your *"Anmeldebuch"* properly attested. This certificate shows the studies you have *"belegt,"* and in conventional terms it is stated regarding your conduct while a student of the university that there is *"Nachteiliges nicht zu bemerken,"* that is, "nothing detrimental to be remarked."

Regarding the different courses of clinical instruction I will not now write in detail. The medical man who contemplates visiting Berlin will soon learn about them on arrival or, at trifling expense, he may procure the announcements in advance through almost any American bookseller. Many of the best courses are free and no one will ask for the student card at the others. Indeed, in some of the best-known courses few persons pay the fee. Lassar's course on skin diseases, for example, is *"belegt"* by only five or six in a semester, although his auditorium is crowded every day. He often jokes about this, but he is so popular and so extremely amiable that every visitor is made welcome. The vacation courses, however, must be paid for, as well as all special arrangements for individual instruction. The facilities for instruction of this kind are ample, so that, at insignificant expense, one may pursue almost any line of study in the most practical manner.

Some of the best operating is absolutely free. Israel, Krause, Sonnenberg, Körte, Hoffa, Rotter, Dührssen, Mackenrodt, Jansen or Neumann—Hahn's successor at Friedrichshain—may all be seen, each at his respective klinik, by presenting your visiting card. To see Olshausen, who is the best known gynecologist in Germany, it is advisable to make a formal call about 5 o'clock at his residence adjoining the Frauenklinik, of which he is the director. He is a most affable gentleman and will invite you to be present at his laparotomies, which occur early each morning. It is customary to give his *"Portier,"* who is in charge of the door of the Frauenklinik, about two marks a week if you are a constant visitor. You will receive from him a postal card every day, and if the case is urgent he will telephone you or send a messenger in search of you.

A few words, in closing, about graduation at the Royal Friedrich-Wilhelm University, as the institution is called in Berlin. Three Americans graduated there last summer and another from New York is now a student. These gentlemen all began their medical studies in Berlin. On matriculating they were obliged to show their passports and a *"Zengniss der Reife,"* that is, evidence of having an amount of knowledge equivalent to that possessed by a graduate of a German gymnasium. This is perhaps represented by the completion of the sophomore year at one of our American colleges. When candidates for graduation they had to show nine semesters' work, including anatomy, chemistry, physics, physiology, histology, biology, internal medicine, obstetrics and gynecology, surgery, ophthalmology and two semesters of pathology. They visited the dean, paid 440 marks each for the examination and presented their credentials. A day or two afterwards they were called before the dean for the *"tentamen medicum,"* which is a written examination lasting two hours. The subject assigned may be in any department of medicine. On one occasion last July the subjects were puerperal eclampsia, preparation and therapeusis of atropin, pernicious anemia and croupous pneumonia. The next day the result was announced and the day set for the *"examen rigorosum,"* which was oral.

There are three divisions of the faculty composed of five members—commissions as they are called—who conduct this examination. The candidate may be assigned to either commission. In one instance he will be examined in anatomy, obstetrics and gynecology, materia medica, ophthalmology and internal medicine. In another commission the professors represent pathology, physiology, surgery, internal medicine and obstetrics and gynecology, while the third commission examines on neurology, hygiene, surgery, pediatrics and anatomy. Of course, each professor may examine in any department of medical science, but he rarely goes outside of his own. The candidates, faultlessly attired in evening clothes, present themselves by appointment at 5 o'clock at the dean's office, where they are received by each member of the commission in turn. Each interview lasts an hour. The number of candidates at any one time may not exceed five. Wine and cake for their refreshment are on a table in the anteroom. Shortly after 10 o'clock, when all five professors have compared their markings, the result is announced.

When a candidate does not pass he may be re-examined at the end of the next semester by paying a small additional fee. When he does pass he is said to have graduated *"rite,"* that is, successfully, or *"cum laude,"* meaning with praise. My young friend Teague of Alabama received this honor last July. The other two distinctions, *magna cum laude*" and *"summa cum laude,"* are rarely attained by foreigners. Once during the past four years an Armenian received the *"magna,"* and his thesis was considered so exceptional that the dean added an extra point, which entitled him to the *"summa."*

The thesis, or *"Arbeit,"* as it is called, is prepared under the direction of a privat docent or professor, who assigns a subject, supplies the bibliography or, if the subject is clinical, provides the patients. When completed it must be approved and recommended to the dean as the *"Doktorarbeit."* The dean examines it and the candidate is directed to a printer, who will strike off 440 copies, 340 of which remain the property of the university, at an expense of 120 to over 200 marks, according to its length. The page proof is submitted to the dean, who either signs it immediately or keeps it to look over. The printer is fined for printing an *"Arbeit"* without the dean's approval. The page proof approved by the dean is kept by the printer, who prints on the title page the date of graduation, a date also ordered printed on the diploma.

The last function when the candidate receives his parchment diploma, also a duplicate on heavy paper and seven printed copies, is known as *"promovieren."* It takes place in the *"Aula"* of the university at a set hour—usually 2 o'clock. The candidate defends three propositions, called *"Thesen,"* before all the world. He arranges for three opponents to be present, one to speak against each proposition. When my friend Stephens of Tennessee went through the ordeal I had the honor to be one of his opponents. I put on evening clothes, brushed my silk hat, polished my patent-leather shoes and invested in a pair of white kid gloves. Thus attired I joined the candidate at the appointed hour. His friends were seated at either side of the room, while he and his opponents, all in full dress, awaited the entrance of the dean. Presently the door at the other end of the room opened and the dean advanced toward us. He was dressed in a flowing gown of red silk or velvet and wore a large turban of the same material. The candidate met him at the middle of the room and presented him with a bound copy of the "*Arbeit*," which contained the three "*Thesen*" to be defended and the names of the opponents. The dean seated himself at one side, the opponents in front of the stage, the candidate mounted the rostrum and reading off a set form in Latin declared that he had fulfilled all requirements and was now prepared to defend three "*Thesen*," which, with permission, he would read in the German language.

When my turn came the candidate announced that in puerperal eclampsia immediate delivery is indicated. I knew, of course, the day before that I was to dispute this proposition, and I had told the candidate he might as well maintain that it was light when the sun was shining. I arose and remarked that even if the delivery were immediate aseptic precautions should not be forgotten, for it was hardly worth while for a woman to recover from eclampsia if she were fated through neglect to die later of sepsis. I referred to Löhlein's statistics, the best in the world, and I called to mind that his treatment was morphin hypodermically. The candidate gave me a look of scorn. He told us that the practitioner of to-day realized the value of asepsis, and it was, he hoped, unnecessary to insist on it on every occasion. As regards Löhlein's twelve cases, he maintained that the number was insufficient on which to generalize, much less to attempt to formulate a treatment. Indeed, his own experience, as "*Unterarzt*" at the Frauenklinik, was much greater than Löhlein's, and for that reason, if for no other, he must persist in his demand for immediate delivery in those cases. Under this denunciation all I could do in reply was to acknowledge the candidate's contention.

When all three opponents had been vanquished the candidate asked if any one else had anything to say against his propositions. He stared his friends on either side of the room boldly in the face, but no one ventured a word. The candidate with an air of triumph then bowed to the dean, who ascended the pulpit and called the candidate to him to administer the Hippocratic oath. This completed, the dean made some more remarks in Latin—undoubtedly felicitous in character—and presented the diploma. The candidate replied with more choice Latin, in which I understood that he was bidding good-bye to the dean, the university and the assembled guests. The dean now offered his congratulations and retired while the candidate —now a candidate no longer, but a full-fledged M.D.—received the good wishes of those present.

The diploma does not entitle the recipient to practice. Indeed, among the Germans it is an honor and not a necessity. The essential thing is to have passed the "*Staatsexamen*." The German student is a graduate of a gymnasium or "*Realschule*" and matriculates as described. He studies first anatomy, physiology, chemistry, physics, botany and zoology for at least four semesters and then applies for examination in these branches. He must show that he has passed this "*physicum*"—which is an oral examination—before he can attend clinical lectures. At the beginning of the tenth semester the student may apply to the government for permission to take the "*Staatsexamen*." He must show in addition to his attendance on lectures nine "*Praktikantenscheine*," that is, certificates that he has stood the quiz before the class to the satisfaction of the professor. Two of these certificates must be in obstetrics and gynecology, two in surgery, two in internal medicine, one in children's diseases, one in ophthalmology, and one in vaccination. It is rumored that a tenth certificate—the subject not announced—will soon be required. The "*Staatsexamen*" is an oral examination and very difficult. It is usual to examine three days in each subject, and it takes about six months to complete. The title received is "*Praktischer Arzt*," or practicing physician, and is a license to practice. If the "*Doktorwürde*," or degree of M.D., is also desired the applicant must write "*Arbeit*" and "*promovieren*," but the commission that now examines him orally is composed of three instead of five members of the faculty.

92 State Street.

Marriages.

John G. Craig, M.D., to Miss Alma Willett, both of Chicago, September 16.

J. J. Dallal, M.D., to Miss Ellen Collins, both of Norcatur, Kan., September 2.

Evlan Sargent, M.D., to Miss Winnie Compton, both of Moline, Ill., September 9.

James M. Blaine, M.D., to Mrs. Ida Ladair Green, both of Denver, Colo., September 16.

George D. Morton, M.D., Philadelphia, to Miss Josephine H. Griswell of Norwood, Pa., June 30.

Rein K. Hartzell, M.D., Allentown, Pa., to Miss Jennie A. Kuntz of Treichlers, Pa., September 15.

John Henry Siedler, M.D., Buffalo, N Y., to Miss Theresa Marie Brick, at Brantford, Ont., September 9.

Leonard E. Welch, Jr., M.D., Albany, Ga., to Miss Frances Laundis of Alabama, at New York City, September 9.

Charles F. Culver, M.D., Sioux Falls, S. Dak., to Miss Grace Isabel Cameron, of St. Paul, Minn., September 2.

Ben Perley Weaver, M.D., to Miss Lucile Porter, daughter of Dr. Miles F. Porter of Fort Wayne, Ind., September 16.

William Jordan Taylor, M.D., Cincinnati, son of Dr. William H. Taylor, to Miss Katharine Warren Weston of New York City, at Cascade-in-the-Adirondacks, N. Y., September 16.

Deaths.

Robert Newman, M.D. Long Island College Hospital, Brooklyn, 1863, for many years a member of the American Medical Association, and of the New York State and County Medical associations, died suddenly at his country residence, Monument Beach, Mass., August 28. He was an honest, painstaking and indefatigable worker in the field of electrotherapeutics, and suffered not a little for his persistent advocacy of the treatment of urethral stricture by electrolysis. During the past year his friends had noticed with regret that his health and strength were on the wane, but he would not listen to their admonitions, and insisted on working to perfect the arrangements for the meeting of the American Electrotherapeutic Association. Even gout and dysentery could not curb his will, and he continued to attend to his practice until his wish to "die in harness" was gratified, for his death came to him while he was sitting in his office chair.

Hugh Morrison Lash, M.D. Cincinnati College of Medicine and Surgery, 1870, professor of mental and nervous diseases in the Central College of Physicians and Surgeons, Indianapolis; consulting physician to the Union State Hospital; member of the American Medical Association, Indiana State Medical Society, Marion County Medical Society, and some-time president of the Indianapolis Medical Society, and a member of the city board of health, died from cardiac asthma at his home in Indianapolis, September 19, after a long period of ill health, aged 59. At a special meeting of the Indianapolis Medical Society, September 20, eulogistic resolutions were adopted.

Samuel Hollingsworth Stout, M.D. University of Pennsylvania, Philadelphia, 1848, surgeon and medical director of hospitals of the Department of Tennessee in the Confederate service during the Civil War, some-time professor of surgical and pathologic anatomy in Atlanta Medical College, and at the time of his death emeritus professor of medicine in Baylor University College of Medicine, Dallas, died at his home in Clarendon, Texas, September 18, aged 81. The Dallas County Medical Society, at a specially-called meeting, appointed pallbearers and committees on resolutions and flowers.

Luther Martin Irwin, M.D. Rush Medical College, Chicago, 1882, of Lafayette, Ind., a member of the Indiana State Medical Society, and once vice-president of the Tippecanoe County Medical Society, died suddenly from heart disease in the office of Dr. Richard B. Wetherill in that city, September 17, aged 48. The Tippecanoe County Medical Society, at a special meeting, September 18, pronounced eulogies on Dr. Irwin and appointed committees on resolutions and flowers.

Andrew H. Kimbrough, M.D. Jefferson Medical College, Philadelphia, 1858, a charter member of the Vermilion County Medical Society, and a member of the Illinois State Medical Society for many years, died at his home in Danville, Ill., September 17, after an invalidism of two years, aged 70.

Isaiah D. Morgan, M.D. University of Pennsylvania, Philadelphia, 1858, a surgeon in the Confederate service during the Civil War, and local surgeon of the Alabama Great Southern Railway, died at his home in Eutaw, Ala., September 17, after an illness of more than a month, aged 73.

Charles Gardiner, M.D. Jefferson Medical College, Philadelphia, 1879, a member of the American Medical Association and a prominent surgeon of Emporia, Kan., died suddenly from heart disease while performing an operation in Emporia, September 24.

Eli Edwards Josselyn, M.D. New York University, 1873, a physician in the woman's department of the Pennsylvania Hospital for the Insane, Philadelphia, died suddenly in a corridor of that institution, September 13, from heart disease, aged 57.

William M. Cox, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1860, a member of the American Medical Association, died at his home in Mount Sterling, Ill., September 14, from persistent hiccough, after an illness of one week, aged 65.

Egbert Guernsey, M.D. New York University, 1846, New York City, for many years editor of the *Medical Times*, died at his summer home in Fishkill Landing, N. Y., September 19, from bronchopneumonia, after an illness of five days, aged 80.

Benjamin G. Kimmel, M.D. Miami Medical College, Cincinnati, 1870, of Youngstown, Ohio, died at the City Hospital, Youngstown, September 19, from skull fracture received in a fall from his bicycle the day before, aged 62.

John K. Dick, M.D. Rush Medical College, Chicago, 1890, formerly of Champaign, Ill., died at his home in Lincoln, Ill., September 20, from typhoid fever, after an illness of three weeks, aged 49.

James S. Hall, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1875, was found dead in his store at Manville, Wyo., September 16, supposedly from the effects of an overdose of morphin.

Franklin N. Morton, M.D. Eclectic Medical Institute, Cincinnati, 1871, died from brain disease at his home in Little Cooley, Pa., September 19, after an illness of ten days, aged 68.

John C. Rhoden, M.D. Rush Medical College, Chicago, 1896, of Elk Point, S. Dak., a member of the American Medical Association, died in a hospital at Council Bluffs, Iowa, September 19.

R. Howard Edmonston, M.D. University of Buffalo, Brooklyn, N. Y., died at the Kingston Avenue Hospital, Brooklyn, September 8, from diphtheria, after an illness of four days.

William Taliaferro, M.D. of Tappahannock, Va., died at the University Hospital, Baltimore, September 17, from diabetes, which appeared after an operation for carbuncle, aged 58.

Will Stephens, M.D. Barnes Medical College, St. Louis, son of Dr. Andrew J. Stephens, died in his father's office, September 21, from the effects of morphin taken with suicidal intent.

Warren H. Blood, M.D. Cooper Medical College, San Francisco, 1885, died at his home in West Oakland, Cal., September 12, from pneumonia, after an illness of two weeks, aged 39.

John A. Draughon, M.D. Bellevue Hospital Medical College, New York, 1875, of Nashville, Tenn., died at the home of his daughter in Springfield, Tenn., September 18, aged 49.

Myron S. Brownson, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1871, died at his home in Kingsley, Mich., September 20, after a lingering illness, aged 58.

Robert Bruce Shaw, M.D. McGill University, Montreal, 1896, of Charlottetown, P. E. I., died September 13 at the Massachusetts General Hospital, Boston, from appendicitis.

Charles S. Williamson, M.D. University of Maryland, Baltimore, committed suicide by taking poison at Winifred, Kanawha County, W. Va., September 15, aged 26.

Theodore Hartwig, M.D. University of Marburg, Germany, 1845, who came to Cedarburg, Wis., in 1846, died at his home in that place, September 20, aged 83.

A. S. Hayley, M.D. Louisville Medical College, 1883, of Yakima City, died at the North Yakima Hospital, September 9, after a long illness, aged 40.

Thomas J. Barton, M.D. Albany (N. Y.) Medical College, 1855, of Tivoli, N. Y., died at the Albany City Hospital, September 11, aged 73.

Joseph Bechtel Mintzer, M.D. Medico-Chirurgical College, Philadelphia, 1891, died at his home in Philadelphia, September 18, aged 48.

Bennie E. Grove, M.D. Kansas City (Mo.) Medical College, 1900, died at his home in Augusta, Okla., September 9, from typhoid fever.

Wesley M. Landon, M.D. Cincinnati College of Medicine and Surgery, 1863, died at his home in Quincy, Ill., September 11, aged 75.

Murdock McLean, M.D. University of California, San Francisco, died September 13 at Placerville, Cal., from fever.

Deaths Abroad.

Dr. Matheus dos Santos, professor of hygiene and president of the medical faculty of Bahia, Brazil, died in Berlin last month.——**Dr. V. V. Muravieff**, an eminent Russian neurologist, died at Moscow, August 20.

Miscellany.

Five-Cent Novel Medicine.—In a "powerfully written and graphically portrayed" story for boys, price five cents, entitled "The Knowlhurst Mystery, or the Strange Adventures of Leslie Norton," appears the following choice bit:

> When the doctor had declared that he was too late, he really believed Peter Norton to be dead.
>
> The little clot of blood which had formed on the base of the brain had so numbed him that coma, like unto death, had set in.
>
> A very slight movement of the muscles of the neck caused the doctor to try an experiment.
>
> He had with him a little pellet of nitroglycerin.
>
> It was a new invention, and the physician trembled at the consequences of using it.
>
> It might destroy the little vitality left, or, on the other hand, it would, perhaps, give life and power to the heart.
>
> In Norton's case, the doctor felt safe in using it, for he was convinced nothing short of the almost miraculous could restore him to life.
>
> He opened the old man's teeth, and placed the pellet on his tongue.
>
> There was no attempt made at swallowing it.
>
> A small quantity of whiskey, poured gradually on the tongue, caused the pellet to glide softly down the throat.
>
> Presently the effect was seen.
>
> The nitroglycerin had dissolved; the shock was felt in every part of the body.
>
> Norton's face became purple, then gradually the blood diffused itself over his body; the shock had dispelled the clot. He opened his eyes and looked around; then closed them, and fell into a calm sleep.

Medical organization in the United States has at last made a movement that will only result in a most satisfactory success, says the *Southern Practitioner*. Since the grand meeting at New Orleans quite a number of states that were hanging back, hesitatingly, doubtingly, as if the movement was one possibly to result in binding them to means and measures that were not calculated to result in general good, have accepted the method of reorganization as suggested, of making the county membership the unit of representation. By the plan now satisfactorily demonstrated to be the only correct and practical one, we have a definite representative body, controlled by the membership of the profession at large through their duly qualified and selected representatives in their state organizations; those in their turn selecting the representatives in the National organization, to whom is entrusted the welfare, individually and collectively, of the profession. In our own state, since the annual meeting held in this city, quite a number of counties have placed themselves in line, and fifty-two county medical societies, composed of the best and most representative men in their respective localities, have been chartered as regularly affiliated and component societies of the State Medical Association. This has so far resulted in increasing more than three-fold the membership in the state organization; and with the work that will be carried on during the months intervening between now and the next annual meeting, we have every reason to believe that but few, if any, counties in the state will fail to affiliate with and be represented in the state association. Furthermore, in counties in which a fair organization had previously existed, there has been quite an accretion of membership. To our friends in this state, as well as in others, we would respectfully but earnestly say—organize! *organize!!* yes, ORGANIZE!!! If you have no organization in your county, at once take steps to get one properly under way. If you have a county organization, and it has not yet properly affiliated with your state organization, see to it that it does so before the next annual meeting; and if you *have* a properly organized and affiliated county medical society, do not let your efforts rest here, but go on with the work, and induce any reputable member of the profession within your acquaintance to join you and your associates. Individual work with your clientele, in your library, in your laboratory, at the bedside of your patients, is all very well; yet a little time given to your county, state and National organizations will benefit both you and your patients in many ways. It is a duty you owe to yourself, to the profession of which you are a member, and to your patrons. No man has a greater necessity for organization and conference with his fellows than the physician. No one can be greater benefited thereby. If medical science and medical and surgical success depended alone on empiricism, each one might flock by himself, and the most successful would be the one with the best memory to remember and utilize the uncertain methods and measures of the empiric. Yet how much grander, how far more beneficent results will accrue to each and every one, and those relying on them, if each one from day to day brings his grains of observation and place them in a granary to which all have access. Again we say, organize in your counties, hold your meetings weekly, semi-monthly, monthly, quarterly or semi-annually, the oftener the better, and if but two or three are gathered together at each meeting, only good can come from your conference, and others will soon be induced to follow the good example you set them. One question we would ask—and its answer will be as strong an argument for organization as could be desired—whether you have been a member of the medical profession one year or fifty years—you know something about the standing of other medical men—then, who occupy the best, the most enviable, the most satisfactory position socially or professionally? Now just take a look around—and whether it be far or near—in the great metropolitan centers of the nation, in the larger towns and cities of your state, do you not find at the head of the profession men who are identified with medical associations? Whether in county, state or National association you will find the cream of the profession—its most progressive, its most successful members—if they can see a benefit therein, why not you?

Book Notices.

A Nurse's Handbook of Obstetrics. For Use in Training Schools. By Joseph Brown Cooke, M.D., Fellow of the New York Obstetrical Society. Cloth. Pp. 391. Price, $2.00. Philadelphia and London: J. B. Lippincott Company. 1903.

The author has endeavored to bring together the principal points that the monthly nurse must know, or ought to know, to make herself an efficient helper. The illustrations are good and the instructions given seem to us in the main sensible and complete.

My Child and I. In Sickness and Health from Pre-natal Life Until Sixteen. By Mrs. F. L. S. Aldrich, M.D., Member of the American Medical Association. Cloth. Pp. 429. Price, $1.50. Philadelphia: P. W. Ziegler & Co. 1903.

This is a book for the laity. The statements made seem to be in the main fairly correct, and the book may be taken, in general, as a fairly reliable guide for parents. The only difficulty is that it may lead to too much home treatment, to the child's disadvantage. The book is rather showily gotten up and has some moderately good pictures. Its style is good.

Quantitative Chemical Analysis. Adapted for Use in the Laboratories of Colleges and Schools. By Frank Clowes, D.Sc. Lond., Emeritus Professor of Chemistry in the University College, Nottingham, and S. Bernard Coleman, A.R.C.Sc. Dublin, Professor of Chemistry in the Southwestern Polytechnic, Chelsea, S. W. Sixth Edition. Cloth. Pp. 602. Price, $3.50 net. Philadelphia: P. Blakiston's Son & Co. 1903.

In this new edition of Clowes and Coleman's well-known work on quantitative analysis numerous alterations and additions have been made in the text. The section on organic chemistry has been revised and the processes of determining molecular weight by the elevation of the boiling point and for the analysis of aluminium alloys have been added. New woodcuts illustrative of the above molecular weight determination process, a new form of container and of the method of drying in vacuo have been inserted. Tables of four-figure logarithms have also been introduced to facilitate calculation.

A Text-Book of Surgical Principles and Surgical Diseases of the Face, Mouth and Jaws. For Dental Students. By H. Horace Grant, A.M., M.D., Professor of Surgery and Clinical Surgery, Hospital College of Medicine. Octavo Volume of 231 Pages, with 68 Illustrations. Cloth. Price, $2.50 net. Philadelphia and London: W. B. Saunders & Co. 1902.

This little work was written for the dental student. The author makes no claim to original thought, nor does he present an elaborate or scientific discussion of the subjects considered. About one-third of the work is devoted to surgical principles; bacteriology, inflammation, repair, general infections, etc. Then follows a brief description of the various affections of the face, mouth, jaws and neck, presented in a plain, simple manner, such as would interest the dental student, for whom the work was written. It is not comprehensive nor scientific enough to be of material value to the surgeon.

The Exact Science of Health Based Upon Life's Great Law. By Robert Walter, M.D. Vol. I.—Principles. Leather. Pp. 302. Price, $2.00. New York: Edgar S. Werner Publishing Company. London: Kegan Paul, Trench, Trubner & Co., Ltd.

There are books that are published for various purposes; in many cases the author gets so full of the subject that it is woe to him if he does not preach his gospel with the aid of printer's ink. The present work probably gives much more satisfaction to the author than it will to the average reader. The main point which he apparently tries to make is that there are three great forces in nature, vitality, chemical affinity and gravitation, co-existent and analogous. In this way he is practically a sort of materialist; we can not say that he has proven his case, or that his arguments and reasoning are such as would convince others as to the probability of his views.

A Thesaurus of Medical Words and Phrases. By Wilfred M. Barton, M.D., Assistant to Professor of Materia Medica and Therapeutics, and Lecturer on Pharmacy, Georgetown University, Washington, D. C.; and Walter A. Wells, M.D., Demonstrator of Laryngology and Rhinology, Georgetown University, Washington, D. C. Flexible Leather. Pp. 534. Price, $2.50 net; with Thumb Index, $3.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

The value of a volume like this for the physician who writes is so evident that it is a little remarkable that one has not been produced before. The authors have given a very complete list of technical synonyms, and the book will be correspondingly of service. It is neatly gotten up and is evidently the result of a good deal of careful labor. Worthy of note is its dedication to Dr. John B. Hamilton, the late editor of The Journal, as an appreciation of the services which he rendered the authors and as a tribute to his learning and skill. We believe that the book will be a very useful one.

The Latin Grammar of Pharmacy and Medicine. By D. H. Robinson, Ph.D., Late Dean of the School of Arts, and Professor of Latin Language and Literature, University of Kansas. With an Introduction by L. E. Sayre, Ph.M., Professor of Pharmacy in, and Dean of Department of Pharmacy, University of Kansas. Fourth Edition, with Elaborate Vocabularies. Thoroughly Revised by Hannah Oliver, A.M., Assistant Professor of Latin, School of Pharmacy, University of Kansas. Cloth. Pp. 277. Price, $1.50 net. Philadelphia: P. Blakiston's Son & Co. 1903.

This is a useful work for physicians and pharmacists. Its study will help do away with the mistakes too often made which show such a lack of culture in the humanities, as they used to be called. The editor states in his preface that a chapter on prescription writing is contributed by Professor Sayre, as well as a list of pharmaceutical and medical terms with their definitions. The latter we find, but the chapter on prescription writing is apparently confined to only a few paragraphs in a chapter on other subjects. A full treatment of the subject would have added to the value and completeness of the book. Aside from this point we see little to criticise. The volume will be a useful one for many students of medicine and pharmacy.

A Text-Book of Chemistry. For Students of Medicine, Pharmacy and Dentistry. By Edward Curtis Hill, M.S., M.D., Medical Analyst and Microscopist; Professor of Chemistry and Metallurgy in the Colorado College of Dental Surgery. With 78 Illustrations, Including 9 Full-Page Half-tone Colored Plates. Pp. xii-523. Cloth. Price, $3.00 net. Philadelphia: F. A. Davis Company.

This book of 523 pages includes the subjects of medical physics, chemic philosophy, inorganic chemistry, organic chemistry, qualitative and quantitative analysis, incompatibility, sanitary chemistry, toxicology, physiologic chemistry, pathologic chemistry, clinic chemistry, not to mention an appendix and a glossary. The various topics are not handled with any great degree of completeness; as a matter of fact, the attempt to condense has in many instances seemed to be at the expense of lucidity. It is stated that it is intended for the use of students of medicine, pharmacy and dentistry; it is certainly not adapted for a student desiring much more than a quiz-compend knowledge of the subject. As a condensation of the subjects it covers, however, it seems quite complete and accurate. Modern work on physical chemistry seems to have been slighted.

Diseases and Injuries of the Eye, with Their Medical and Surgical Treatment. By George Lawson, F.R.C.S. Eng., Surgeon-Oculist-in-Ordinary to Her Majesty, the Late Queen Victoria. Sixth Edition, with 249 Illustrations. Revised and, in Great Measure, Rewritten. By *Arnold Lawson*, F.R.C.S. Eng., Assistant Surgeon to the Royal London Ophthalmic Hospital. Cloth. Pp. 587. Price, about $5. London: Smith, Elder & Co. 1903.

It seems appropriate that this well-known text-book should be continued by a relative of the great ophthalmologist who first wrote it. The fifth edition was published in 1885, since when several additions have been made to the original chapters. In the present work fresh articles have been written on heterophoria, affections of the eye in disease of the nervous system, the pupil, the development of the eye and elementary optics. Gradually the fact that anomalies of the extrinsic ocular muscles may be productive of functional disturbances without apparent deviation of either eye is gaining ground even in conservative England. Whatever be the status of heterophoria in the causation of symptoms, near and remote, it is at least a considerable satisfaction to notice that this latest of the British text-books does not neglect even the subject of cyclophoria, a condition whose pathology Savage has done so much to elucidate, but which has not received that recognition its importance deserves. We regret that no reference has been made to several instruments which we are accustomed to use on this side of the Atlantic; among them the electric ophthalmoscope and the ophthalmometer with the self-illuminating mires. The illustrations are entirely in black, but are unusually well drawn and, especially when they depict minute changes in the fundus or elsewhere, are, in consequence, more valuable than those glaring color patches that so often in some treatises misrepresent ophthalmoscopic and other findings. The formulæ (seventy in all) at the back of the book, fairly represent the best of the ordinary remedial mixtures now used in diseases of the eye. Probably it is because they have not as yet reached the "text-book age" that dionin, argyrol, jequiritol, and other agents (which some of us believe to be of considerable value) have not been mentioned.

Brewer's Surgery. A Text-Book of Surgery for Students and Practitioners. By George E. Brewer, A.M., M.D., Lecturer on Clinical Surgery at the College of Physicians and Surgeons (Medical Department of Columbia University), New York. With 280 Engravings and 7 Plates in Colors and Monochrome. Cloth. Pp. 712. Price, $4.00. Philadelphia and New York: Lea Brothers & Co. 1903.

The author has attempted to write a text-book on surgery in a single small volume of six hundred and eighty pages. The author says he "has endeavored in the present work to give the essential facts in practical surgery as briefly as is compatible with clearness." While brevity and condensation in writing are often desirable qualities, there is such a thing as condensing matter until all the information which it contains is squeezed out, and that is what the author has done frequently in this work. For instance, the subject of gangrene in all its varieties is covered in twenty lines. Only seventeen pages are devoted to "tumors," and as there are several large illustrations included in these seventeen pages, the text amounts to little more than a simple definition of the various kinds of new growths. Under treatment of aneurisms is mentioned "the subcutaneous injection of a 1 per cent. solution of gelatin in normal salt solution," but nothing is said of the amount to be injected; of the necessity and great difficulty of thoroughly sterilizing gelatin solutions, and of the danger of fatal tetanus (which has occurred now a number of times) following the use of solutions of gelatin not properly sterilized. In a matter of this kind the advice to use a solution of gelatin without giving the details of the method is positively dangerous, and brevity becomes a great mistake. Ganglion is described as "a hernial protrusion of the synovial membrane through the fibrous portion of a tendon-sheath." This is a mistake, as the majority of so-called ganglions have no connection whatever with the tendon sheaths. The spasmodic and the contractured varieties of torticollis are confused and considered as one affection, although they are decidedly distinct conditions. The treatment of empyema is dismissed with a single sentence as follows: "The treatment of empyema is by establishing free drainage of the pleural cavity." The success of the treatment, however, depends so much on the method and detail of carrying it out that a little advice here would have been desirable. The freezing point of the blood serum is given as 0.36 C. This is evidently a typographical error, as it should be 0.56 C. Ligations of arteries, amputations, etc., are considered in the stereotyped way, except perhaps a little more condensed. Brevity is the greatest fault of the work, as many of the subjects are considered so superficially that the practitioner will usually look in vain for advice that will help him out of his difficulties, but to the student who is obtaining his first general idea of surgery the work may prove of value.

State Boards of Registration.

Indiana's First Preliminary Examination of Students.—The first examination of prospective medical students held by the Indiana State Board of Medical Registration, was held at the State House, Indianapolis, September 18; 15 applicants appeared.

Texas Announcement.—The Board of Medical Examiners for the State of Texas will hold its next meeting in Fort Worth, Oct. 13 to 16, for the examination of applicants to practice medicine. For further information address the secretary, Dr. M. M. Smith, Austin.

Georgia Examination.—The regular board of State Medical Examiners for Georgia will meet in Atlanta, Ga., on Tuesday, Oct. 13, 1903, at the Capitol, for examination of applicants for permanent license. A diploma from a medical college recognized by the Medical College Association is required.

Virginia Report.—Dr. R. S. Martin, secretary of the Medical Examining Board of Virginia, reports that at the examination held at Richmond, June 22 to 25, 1903, the number of subjects examined in was 9 and the percentage required to pass was 75; 196 persons were examined, 99 passed, 22 failed, 3 withdrew and 72 were not graduates and took only a partial examination. The questions were partly written and partly oral.

PASSED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
1	R.	University College of Medicine	1903	81
7	R.	University College of Medicine	1903	83
25	R.	University College of Medicine	1903	77
27	R.	University College of Medicine	1903	80
28	R.	University College of Medicine	1903	82
29	R.	University College of Medicine	1903	75
31	R.	University College of Medicine	1903	79
32	R.	University College of Medicine	1903	83
33	R.	University College of Medicine	1901	78
45	R.	University College of Medicine	1903	76
67	R.	University College of Medicine	1903	79
68	R.	University College of Medicine	1903	81
70	R.	University College of Medicine	1903	80
74	R.	University College of Medicine	1903	76
75	R.	University College of Medicine	1903	83
77	R.	University College of Medicine	1903	75
80	R.	University College of Medicine	1903	82
90	R.	University College of Medicine	1903	75
98	R.	University College of Medicine	1903	78
99	R.	University College of Medicine	1903	78
102	R.	University College of Medicine	1903	82
122	R.	University College of Medicine	1903	84
125	R.	University College of Medicine	1903	82
130	R.	University College of Medicine	1903	85
151	R.	University College of Medicine	1903	87
158	R.	University College of Medicine	1903	76
159	R.	University College of Medicine	1903	76
194	R.	University College of Medicine	1903	81
179	R.	University College of Medicine	1903	81
11	R.	University of Boston	1903	80
62	R.	University of the South	1903	79
76	R.	University of the South	1900	76
165	R.	University of the South	1903	75
166	R.	University of the South	1903	75
185	R.	University of the South	1903	77

PASSED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
66	R.	University of Maryland	1903	85
196	R.	University of Maryland	1867	85
124	R.	University of Maryland	1903	85
88	R.	University of Virginia	1903	83
91	R.	University of Virginia	1901	75
93	R.	University of Virginia	1903	80
94	R.	University of Virginia	1903	79
96	R.	University of Virginia	1903	77
103	R.	University of Virginia	1903	79
104	R.	University of Virginia	1903	83
109	R.	University of Virginia	1903	85
123	R.	University of Virginia	1903	79
126	R.	University of Virginia	1903	79
138	R.	University of Virginia	1903	85
144	R.	University of Virginia	1903	82
174	R.	University of Virginia	1898	82
177	R.	University of Virginia	1899	82
178	R.	University of Virginia	1899	87
86	R.	University of Virginia	1903	76
142	R.	University College of Virginia	1903	75
181	R.	University of New York	1897	77
182	R.	University of New York	1889	77
195	R.	University of Michigan	1903	80
3	R.	Medical College of Virginia	1903	80
14	R.	Medical College of Virginia	1903	79
15	R.	Medical College of Virginia	1903	81
54	R.	Medical College of Virginia	1903	81
134	R.	Medical College of Virginia	1903	80
135	R.	Medical College of Virginia	1903	77
136	R.	Medical College of Virginia	1903	80
137	R.	Medical College of Virginia	1903	81
152	R.	Medical College of Virginia	1903	76
153	R.	Medical College of Virginia	1903	79
155	R.	Medical College of Virginia	1903	78
156	R.	Medical College of Virginia	1903	84
161	R.	Medical College of Virginia	1903	79
163	R.	Medical College of Virginia	1903	79
167	R.	Medical College of Virginia	1903	84
168	R.	Medical College of Virginia	1903	81
170	R.	Medical College of Virginia	1903	79
173	R.	Medical College of Virginia	1903	79
8	R.	Columbian University	1903	84
30	R.	Columbian University	1903	89
71	R.	Columbian University	1903	81
9	R.	North Carolina Medical College	1902	80
12	R.	Howard University	1902	79
107	R.	Howard University	1903	78
13	R.	Leonard Medical College	1896	75
19	R.	Leonard Medical College	1903	79
140	R.	Leonard Medical College	1903	77
145	R.	Leonard Medical College	1903	75
23	R.	Johns Hopkins University	1903	77
191	R.	Johns Hopkins University	1902	85
41	R.	Tulane University	1903	87
81	R.	Maryland Medical College	1903	77
84	R.	Maryland Medical College	1903	78
133	R.	Maryland Medical College	1903	78
95	R.	Baltimore University	1898	80
114	R.	College of Physicians and Surgs., Atlanta	1903	81
176	H.	Hahnemann Med. College, Pennsylvania	1894	82
187	R.	University of Louisville	1889	78
189	R.	Cincinnati College of Med. and Surgery	1876	75
190	R.	Louisville Medical College	1890	81
193	R.	College of Phys. and Surgs., Baltimore	1878	75

FAILED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
10	R.	University College of Medicine	1903	73
44	R.	University of Virginia	1903	74
78	R.	University of Virginia	1902	74
110	R.	University of Virginia	1900	73
160	R.	University of the South	1903	61
169	R.	University of the South	1903	71
141	R.	Maryland Medical College	1903	65
100	R.	Maryland Medical College	1903	..
16	R.	Columbian University	1902	74
17	R.	Medical College of Virginia	1903	74
52	R.	Medical College of Virginia	1903	72
154	R.	Medical College of Virginia	1903	72
157	R.	Medical College of Virginia	1903	74
172	R.	Medical College of Virginia	1903	74
36	R.	Leonard Medical College	1903	65
55	R.	Leonard Medical College	1902	71
106	R.	Leonard Medical College	1902	55
49	R.	Baltimore University	1903	58
97	R.	Baltimore Medical College	1901	70
118	R.	University of Maryland	1902	70
105	R.	University of Maryland	1903	74
188	R.	Louisville Medical College	1890	68

Connecticut Report.—The report of the examinations by the examining committee of the Connecticut Medical Society, July 14 and 15, is received. The percentages are not given; all that passed exceeded 75..those that failed were below this figure. Of those that passed 8 were graduates of the medical department of Yale University, 4 of the College of New York, 4 of the College of Physicians and Surgeons, New York, 4 of the Baltimore Medical College, 2 from Jefferson Medical College, 2 from the University of Vermont, and one each from the Cincinnati College of Medicine and Surgery, the Royal College of Physicians and Surgeons, London, Medical College of South Carolina, Harvard Medical College, New York University, Niagara University, Cornell University and Long Island College Hospital. Of those that failed 4 were from the College of Physicians and Surgeons, Baltimore, and one each from the College of Physicians and Surgeons, Boston, University of the South, Tufts Medical College, and the medical department of Yale University.

Iowa Report.—Dr. J. F. Kennedy, secretary of the Iowa State Board of Medical Examiners, Des Moines, reports that 149 candidates were examined in June and July, of whom 128 passed and 21 failed.

PASSED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
1	H.	Chicago Homeopathic Medical College	1903	80
2	H.	Chicago Homeopathic Medical College	1903	82
3	H.	Chicago Homeopathic Medical College	1903	‡75
4	R.	College of Phys. and Surgs., Chicago	1903	81
5	R.	College of Phys. and Surgs., Chicago	1903	79
6	R.	College of Phys. and Surgs., Chicago	1903	86
7	R.	College of Phys. and Surgs., Chicago	1903	89
8	R.	College of Phys. and Surgs., Chicago	1903	87
9	R.	College of Phys. and Surgs., Chicago	1903	80
10	R.	College of Phys. and Surgs., Chicago	1903	80
11	R.	College of Phys. and Surgs., Chicago	1903	83
12	R.	College of Phys. and Surgs., Chicago	1902	*85
13	R.	College of Phys. and Surgs., Chicago	1903	83
14	R.	College of Phys. and Surgs., Chicago	1903	76
15	R.	College of Phys. and Surgs., Chicago	1903	81
128	R.	College of Phys. and Surgs., Chicago	1903	81
16	R.	College of Phys. and Surgs., New York	1903	91
17	R.	Denver and Gross Medical College	1903	87
18	H.	Hahnemann Medical College, Chicago	1903	82
19	H.	Hahnemann Medical College, Chicago	1903	79
20	H.	Hahnemann Medical College, Chicago	1903	81
21	H.	Hahnemann Medical College, Chicago	1903	81
22	H.	Hahnemann Medical College, Chicago	1903	83
23	H.	Hahnemann Medical College, Chicago	1903	82
24	H.	Hahnemann Medical College, Chicago	1903	84
25	H.	Hering Medical College, Chicago	1903	*78
26	R.	Illinois Medical College, Chicago	1901	81
27	R.	Iowa College of P. and S., Des Moines	1903	82
28	R.	Creighton Medical College, Omaha	1903	80
29	R.	Creighton Medical College, Omaha	1903	79
30	R.	Creighton Medical College, Omaha	1903	83
31	R.	Creighton Medical College, Omaha	1903	82
32	R.	Keokuk, Iowa, Medical College	1903	*79
33	R.	Miami Medical College, Cincinnati	1902	87
34	R.	Milwaukee Medical College	1903	78
35	R.	Northwestern University, Chicago	1903	81
36	R.	Northwestern University, Chicago	1903	87
37	R.	Northwestern University, Chicago	1903	89
38	R.	Northwestern University, Chicago	1903	85
39	R.	Northwestern University, Chicago	1903	85
40	R.	Northwestern University, Chicago	1900	91
41	R.	Northwestern University, Chicago	1903	85
42	R.	Northwestern University, Chicago	1903	88
43	R.	Northwestern University, Chicago	1903	87
44	R.	Northwestern University, Chicago	1902	88
45	R.	Northwestern University, Chicago	1903	86
46	R.	Northwestern University, Chicago	1903	83
47	R.	Northwestern University, Chicago	1903	87
48	R.	Northwestern University, Chicago	1903	84
49	R.	Northwestern University, Chicago	1903	85
50	R.	Northwestern University, Chicago	1903	81
51	R.	Northwestern University, Chicago	1903	89
52	R.	Northwestern University, Chicago	1903	87
53	R.	Northwestern University, Chicago	1903	85
54	R.	Northwestern University, Chicago	1903	84
55	R.	Northwestern University, Chicago	1903	88
56	R.	Northwestern University, Chicago	1903	79
57	R.	Northwestern University, Chicago	1903	82
58	R.	Northwestern University, Chicago	1903	87
59	R.	Northwestern University, Chicago	1903	84
60	R.	Northwestern University, Chicago	1903	77
61	R.	Omaha Medical College	1902	83
62	R.	Rush Medical College, Chicago	1901	92
63	R.	Rush Medical College, Chicago	1903	90
64	R.	Rush Medical College, Chicago	1903	78
65	R.	Rush Medical College, Chicago	1884	82
66	R.	Rush Medical College, Chicago	1903	86
67	R.	Rush Medical College, Chicago	1903	87
68	R.	Rush Medical College, Chicago	1882	78
69	R.	St. Louis College of Phys. and Surgeons	1901	75
70	R.	St. Louis College of Phys. and Surgeons	1900	84
71	R.	Toronto University	1903	87
72	R.	University of Iowa, Iowa City	1903	82
73	R.	University of Iowa, Iowa City	1903	81
74	R.	University of Iowa, Iowa City	1903	86
75	R.	University of Iowa, Iowa City	1903	86
76	R.	University of Iowa, Iowa City	1903	79
77	R.	University of Iowa, Iowa City	1903	87
78	R.	University of Iowa, Iowa City	1903	86
79	R.	University of Iowa, Iowa City	1903	87
80	R.	University of Iowa, Iowa City	1903	84
81	R.	University of Iowa, Iowa City	1903	86
82	R.	University of Iowa, Iowa City	1903	87
83	R.	University of Iowa, Iowa City	1903	83
84	R.	University of Iowa, Iowa City	1903	86
85	R.	University of Iowa, Iowa City	1903	85
86	R.	University of Iowa, Iowa City	1903	84
87	R.	University of Iowa, Iowa City	1903	79
88	R.	University of Iowa, Iowa City	1903	83
89	R.	University of Iowa, Iowa City	1903	85
90	R.	University of Iowa, Iowa City	1903	81
91	R.	University of Iowa, Iowa City	1903	92
92	R.	University of Iowa, Iowa City	1903	88
93	R.	University of Iowa, Iowa City	1903	83
94	R.	University of Iowa, Iowa City	1903	80
95	R.	University of Iowa, Iowa City	1903	86
96	R.	University of Iowa, Iowa City	1903	82
97	R.	University of Iowa, Iowa City	1903	79
98	R.	University of Iowa, Iowa City	1903	85

PASSED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
99	R.	University of Iowa, Iowa City.........	1903	79
100	R.	University of Iowa, Iowa City.........	1903	89
101	R.	University of Iowa, Iowa City.........	1903	90
102	R.	*University of Iowa, Iowa City.........*	*1903*	*82*
103	R.	University of Iowa, Iowa City.........	1903	90
104	R.	University of Iowa, Iowa City.........	1903	86
105	R.	University of Iowa, Iowa City.........	1903	90
106	H.	Coll. Homeopathic Med., Univ. of Iowa.	1903	83
107	H.	Coll. Homeopathic Med., Univ. of Iowa.	1903	82
108	H.	Coll. Homeopathic Med., Univ. of Iowa.	1903	85
109	H.	Coll. Homeopathic Med., Univ. of Iowa.	1903	84
110	H.	Coll. Homeopathic Med., Univ. of Iowa.	1903	82
111	H.	Coll. Homeopathic Med., Univ. of Iowa.	1903	85
112	H.	Coll. Homeopathic Med., Univ. of Iowa.	1903	83
113	H.	Coll. Homeopathic Med., Univ. of Iowa.	1902	83
114	H.	Coll. Homeopathic Med., Univ. of Iowa.	1903	80
115	H.	Coll. Homeopathic Med., Univ. of Iowa.	1903	83
116	H.	Coll. Homeopathic Med., Univ. of Iowa.	1903	81
117	H.	Coll. Homeopathic Med., Univ. of Iowa.	1903	83
118	R.	University of Michigan...............	1902	92
119	R.	University of Michigan...............	1903	85
120	R.	University of Michigan...............	1903	88
122	R.	University of Michigan...............	1903	89
123	R.	University of Minnesota..............	1903	87
124	R.	University of Nebraska, Omaha........	1903	82
125	R.	*University of Nebraska, Omaha........*	*1903*	*88*
126	R.	University of Nebraska, Omaha........	1903	81
127	R.	Washington University, St. Louis......	1903	91

FAILED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
129	H.	Hahnemann Med. College, Kansas City.	1902	67
132	H.	Hahnemann Medical College, Chicago..	1903	73
130	R.	*Keokuk, Iowa, Medical College.........*	*1895*	33
134	R.	Keokuk, Iowa, Medical College.........	1903	*66
131	R.	Rush Medical College, Chicago.........	1900	55
133	R.	Meharry Medical College, Nashville....	1895	68
135	R.	University of Nebraska...............	1903	71
138	R.	University of Iowa, Iowa City.........	1874	69
136	R.	Kentucky School of Medicine.........	1898	71
137	R.	Omaha Medical College...............	1903	69
139	R.	Creighton Medical College, Omaha.....	1903	66
140	R.	*Barnes Medical College, St. Louis......*	*1900*	†62
146	R.	Barnes Medical College, St. Louis......	1902	73
143	R.	*Barnes Medical College, St. Louis......*	1903	70
141	R.	University College of Med., Kansas City	1902	*65
145	R.	University Med. College, Kansas City..	1903	42
149	R.	University Med. College, Kansas City..	1903	*72
142	R.	Iowa College of P. and S., *Des Moines..*	*1903*	*74
144	E.	Eclectic Medical Institute, Cincinnati..	1903	64
147	R.	St. Louis College of Phys. and Surgeons	1903	69
148	R.	College of Phys. and Surgeons, Chicago.	1899	73

* Second examination. † Fourth examination. ‡ Fifth examination.

Medical Organization.

Monroe County (Fla.) Medical Society.

By the efforts of Dr. Joseph N. Fogerty, Key West, councilor for the Fourth District, a reorganization of the old Key West Medical Society, which was organized in 1872, and discontinued in 1884, was effected with the following officers: Dr. Robert D. Murray, president; Dr. Emilio Rousseau, vice-president; Dr. G. R. Plummer, U. S. Navy, secretary, and Dr. Katharene W. Allee, treasurer, all of Key West.

Putnam County (Ohio) Medical Society.

At Ottawa, Ohio, on August 27, under the direction of Dr. Julius H. Jacobson, Toledo, councilor for the Fourth District, this society was organized with the following officers: President, Dr. John C. McClung, Leipsic; vice-president, Dr. C. F. Douglass, Kalida; treasurer, Dr. Warren F. Reed, Ottawa; secretary, Dr. Wiley D. Hickey, Leipsic, and board of censors, Drs. Charles E. Beardsley, Ottawa, Harry A. Lewis, Continental, and Dr. Alva L. Paul, Ottawa.

Pocahontas County (Iowa) Medical Society.

The physicians of Pocahontas County recently met at Pocahontas and organized a county society, adopted the constitution and by-laws as recommended by the American Medical Association and elected the following officers. Dr. Andrew L. Belt, Gilmore, president; Dr. Edmond W. Wilson, Rolfe, secretary and treasurer; Dr. I. D. Wallace, Plover, vice-president; Drs. A. H. Thornton and J. W. Starr, Pocahontas, and Frank E. Heathman, Havelock, censors, and Drs. Oscar H. Barthel, Pocahontas, Charles R. Whitney, Fonda, and J. D. Wallace, Plover, committee on public health and legislation.

South Dakota Second District Medical Society.

On September 15 about twenty-five physicians met Dr. Edwin T. Ramsey Clark, councilor for the Second District, at Watertown and completed the organization of a medical society for that district, which comprises the counties of Clark, Codington, Deuel, Hamlin, and part of Grant. The constitution and by-laws recommended by the American Medical Association were adopted and Dr. Edwin T. Ramsey, Clark, was elected president, and Dr. James B. Vaughan, Castlewood, secretary. Meetings will be held every two months, and the whole day will be devoted to the interests of the profession, the morning being taken up with clinics, the afternoon and evening being devoted to the reading and discussion of papers.

Societies.

COMING MEETINGS.

Colorado State Medical Society, Denver, Oct. 6-8.

Medical Association of the District of Columbia, Washington, Oct. 6.

Idaho State Medical Society, Boise, Oct. 8-9.

Mississippi Valley Medical Association, Memphis, Tenn., Oct. 7-9.

Tri-State Medical Society of Alabama, Georgia and Tennessee, Oct. 13-15.

Vermont State Medical Society, Bellows Falls, Oct. 15-16.

New York State Medical Association, New York City, Oct. 19-22.

American Public Health Association, Washington, D. C., Oct. 26-30.

Hawaiian Territorial Medical Society, Honolulu, Nov. 7.

Oklahoma Territory Medical Association, Oklahoma City, Nov. 11.

Colorado State Medical Society.—The annual meeting will be held in Denver, October 6, 7 and 8, under the presidency of Dr. William W. Grant, Denver.

Louisville Medical and Surgical Society.—At the annual meeting held September 21 Dr. Frank J. Kiefer was elected president; Dr. Irvin Abell, vice-president; Dr. A. Henry Falconer, treasurer, and Dr. William T. McKinney, secretary.

Union Meeting.—On September 15 the Cheshire County (N. H.) Medical Society, Franklin District (Mass.) Medical Society, Connecticut River Valley Medical Society and Windham County (Vt.) Medical Society held a joint meeting at East Northfield, Mass.

Carroll County (N. H.) Medical Society.—At the annual meeting held at Sanbornville, September 2, Dr. W. S. Davis, Sanbornville, was elected president; Dr. Ervin W. Hodsdon, Centerville, secretary, and Dr. Nathaniel H. Scott, Wolfboro, treasurer. The 1904 meeting will be held at Wolfboro.

Crawford County (Ill.) Medical Society.—At the meeting held in Robinson, September 10, Dr. Columbus Barlow, Robinson, presented a motion that the constitution be so amended that any legally registered physician in good standing in the county may be entitled to membership in the society. The matter was laid on the table until the next meeting.

Kankakee Valley District (Ind.) Medical Society.—At the fourth annual meeting held in North Judson, September 8, Dr. David J. Loring, Valparaiso, was elected president; Dr. John M. Ward, Kewanna, vice-president; Dr. George E. Hoffman, Rochester, secretary, and Dr. G. W. Thompson, Winamac, treasurer. The next meeting will be held in Hammond, December 8.

Association of Surgeons of the Pennsylvania Railway System.—At the annual meeting held in Fort Wayne, September 18, the following officers were elected: President, Dr. G. W. Thompson, Winamac, Ind.; vice-presidents, Drs. Montgomery Linville, Newcastle, Pa., and Clarence W. Coulter, Oil City, Pa., and secretary and treasurer, Dr. Richard J. Morgan, Van Wert, Ohio.

Houghton County (Mich.) Medical Society.—At the annual meeting held in Houghton, September 7, Dr. E. C. Dudley of Chicago delivered an address on "Some Practical Points in Gynecology," and the following officers were elected: Dr. Joseph E. Scallon, Hancock, president; Dr. Albert B. Simonson, Calumet, vice-president; Dr. James E. Hosking, Kearsarge, secretary, and Dr. A. G. McLeod, treasurer.

Mississippi Valley Medical Association.—The program for the entertainment of the members of the association at its meeting in Memphis, Oct. 7, 8, and 9, includes a trolley ride, a reception and ball and an old-fashioned Southern barbecue.——Dr. W. Britt Burns has been made chairman of the committee of arrangements, vice Dr. Edward C. Ellett, resigned.——The

Chicago members of the association will leave Chicago via the Illinois Central at 6:20 p. m. Tuesday, October 6.

Little Kanawha and Ohio Valley Medical Association.—At the annual meeting held in Parkersburg, September 3, the following officers were elected: President, Dr. Thomas A. Harris, Parkersburg; vice-presidents, Drs. Alexander J. Mitchell, Burning Springs, John H. Kelley, Parkersburg, and J. Riley McCollum, St. Mary's; treasurer, Dr. Charles W. Hudson, Parkersburg; secretary, Dr. Rolla Camden, Parkersburg, and assistant secretary, Dr. Steidger D. H. Wise, Parkersburg.

Washington County (Vt.) Medical Society.—The annual meeting was held at Montpelier, September 8. The following officers were elected: Dr. Myron L. Chandler, Barre, president; Dr. Walter D. Berry, Waterbury, vice-president; Dr. Orlando G. Stickney, Barre, secretary; Dr. Charles E. Chandler, Montpelier, treasurer; Drs. Carlos A. Shaw, Northfield, and Michael F. McGuire, censors, and Drs. Lester W. Burbank, Cabot, and Dr. V. C. Goodrich, Barre, delegates to the Vermont State Medical Society.

American Public Health Association.—The following railroad rates have been secured for the thirty-first annual meeting of this association at Washington, D. C., Oct. 26 to 30, 1903: In the New England, Trunk Line, Central and Southeastern territories the rate will be one and one-third fare, certificate plan, for the round trip. A certificate must be obtained from the ticket agent for each going ticket purchased and be presented to Dr. E. W. Reisinger for signature and vise of the special agent at the meeting. First-class tickets must be purchased direct to Washington, free fare one way. No stopovers en route will be granted. A charge of 25c. will be made on each certificate signed at the meeting. Arrangements with Canada and western territory have not been completed, but are expected to agree with rates granted as above. Tickets are on sale three days prior to date of meeting, good to return three days after closing date, Sundays excluded in each instance. At present the rate is one and one-third fare for the round trip, certificate plan, throughout the entire United States, except in territory west of Chicago and St. Louis, Peoria, and north of Missouri River. The committee expects to secure additional time extension on return tickets.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Sixteenth Annual Meeting, held in Chicago, Sept. 22-24, 1903.

The association met under the presidency of Dr. L. H. Dunning, Indianapolis.

Dr. William A. Evans, Chicago, delivered an address of welcome on behalf of the local medical profession, which was responded to by President Dunning.

The New Officers.

The following officers were elected for the ensuing year: President, Dr. Walter B. Dorsett, St. Louis; vice-presidents, Drs. A. B. Miller, Syracuse, N. Y., and W. D. Haggard, Nashville, Tenn.; secretary, Dr. Wm. Warren Potter, Buffalo, N. Y., re-elected; treasurer, Dr. X. O. Werder, Pittsburg, Pa.

The time and place for holding the next annual meeting of the association were left to the executive council to decide.

Following are some points brought out in the principal papers read.

The Relation of the Colon to Abdominal Tumors.

A paper with this title was read by Dr. James F. Baldwin, Columbus, Ohio. The colon, while it is quite movable, has its mesocolon well fixed to the abdominal parietes. By inflating the colon, when necessary, by pumping air in at the anus, its relationship to abdominal tumors can be quite definitely determined, and this relationship will enable an accurate diagnosis of the tumor to be made in many cases in which such diagnosis would otherwise be impossible. This is particularly true in differentiating tumors of the spleen, pancreas, kidneys, liver, including the gall bladder, etc., from tumors originating in the pelvis or in connection with the small intestine and mesentery.

DISCUSSION.

Dr. J. Henry Carstens, Detroit, had seen cysts of the kidney which were attached to the left side and had extended down into the pelvis, pushing the colon and everything on to the right side, so that it was impossible to differentiate them from a cyst of the ovary.

Dr. L. H. Dunning, Indianapolis, described an echinococcus cyst of the pancreas, which was supposed to be a cyst of the kidney.

Dr. Baldwin said that 95 per cent. of tumors of the pancreas appear above the transverse colon; if at the tail of the pancreas, partly to one side: if at the head, the other side, while tumors of the kidney appear behind the colon. A tumor of the suprarenal capsule might be mistaken for a tumor of the tail of the pancreas, but not of the kidney substance itself, if the colon was fully distended.

Cesarean Section.

Dr. M. Stamm, Fremont, Ohio, read a paper on "The Value of Vaginal Cesarean Section," giving to Dührssen of Berlin the credit for having introduced this valuable method and quoting the latter's list of indications and technic. The essayist stated that the majority of the 60 or more recorded cases of vaginal cesarean section were for cancer of the uterus, but the number performed for puerperal convulsions is increasing rapidly, and this trouble will furnish the chief indication in the future. Most authorities agree that rapid delivery is the most important measure to reduce the mortality in eclampsia.

THE LIMITATIONS OF CESAREAN SECTION.

In a paper with this title Dr. E. Gustav Zinke, Cincinnati, analyzed 88 cesarean sections, reported by fifty-two different authors since January, 1900. Out of 81 mothers 66 lived, 81.5 per cent. But by excluding the deaths of 5 of the mothers which were due to malignant disease, death taking place two months, four months, one year and two years respectively after the operation, 71, not 66, mothers lived, and the maternal mortality was 12.34 per cent. Of the 90 children born, 56 lived, but excluding 13 cases in which the result as to the child has been omitted, and the cases of death before the operation, etc., the immediate fetal mortality is reduced to 25.26 per cent. When two years ago the author advocated the adoption of cesarean section for certain cases of central placenta previa, there was quite a marked opposition, and but few supported the speaker in his recommendation of the operation for this always alarming obstetric complication. Much has been said and written against it since, and still to-day nearly every new text-book on obstetrics and other recognized authorities on this subject admit that cesarean section may be justifiable under favorable conditions in the class of cases of a placenta previa then referred to.

DISCUSSION.

Dr. Charles S. Bacon, Chicago, believes vaginal cesarean section is undoubtedly of great value, not only for cancer, but also in cases where cesarean section is indicated for other reasons, when there is no contraction of the pelvis, and no sepsis, as, for instance, in cases of premature detachment of the placenta, a complication which defies all reasonable treatment. In placenta previa, however, there would be the same objection that has always obtained in regard to the typical operation. The other means of treating placenta previa are so perfect, so far as the mother is concerned, that it would only be in the case of a very competent operator, and in probably rare instances, that this operation or the typical one would be chosen. When we come to puerperal eclampsia, there is ground for either one of the operations. He believes that there is a future for the vaginal operation in cases of puerperal eclampsia, particularly those that are very carefully selected.

Dr. Walter B. Dorsett, St. Louis, narrated a case of successful vaginal section and delivery for placenta previa lateralis. He believes that possibly the operation is more applicable in placenta previa cases than in cancerous disease.

Dr. Frederick Blume, Pittsburg, asked Dr. Dorsett whether he would advise incision of the cervix in cases of six months' gestation with placenta previa, and whether he would practice it in every case.

Dr. Dorsett replied: Yes, *judging* by the experience I have had with this case.

Dr. Edwin Ricketts, Cincinnati, advised administering veratrum before the anterior and posterior incisions are resorted to.

Dr. J. Henry Carstens said that when the gynecologist encounters a contracted pelvis, vaginal section is out of the question unless it is a case of five or six months' pregnancy. Where a woman has had a convulsion and then recovers consciousness, such a case requires premature slow delivery. If cancer is adherent to the pelvis, rectum and bladder, it requires cesarean section, as advocated by Dr. Zinke.

Dr. Rufus B. Hall, Cincinnati, emphasized the importance of early cesarean section to avoid infection, and cited a case in point.

Dr. Charles L. Bonifield, Cincinnati, commended vaginal cesarean section in cases in which there is danger of infection in doing the suprapubic operation.

Dr. James F. Baldwin, Columbus, Ohio, has made five, possibly six, cesarean sections since 1900 without maternal or fetal death. He heartily agreed with Dr. Zinke.

The Gilliam Operation.

Dr. Edward J. Ill, Newark, N. J., has done Gilliam's operation 86 times, or in 68 per cent. of all cases operated on for retrodisplacements. There were no deaths; 51 cases have reported themselves as entirely well, 6 as markedly improved, and 4 as no better; 7 have become pregnant, and two have given birth normally; only 1 of the 4 reported as no better had a relapse of the malposition. This one was operated on again and an atrophy of the distal end of the round ligament discovered. Dr. Ill modified Dr. Gilliam's operation by not piercing the whole abdominal wall, fearing a weakness from which hernia might result. He separates the rectus abdominis from its anterior sheath and pierces the rectus muscle, the inner sheath, and the perineum, and progresses as taught by Dr. Gilliam, fastening, however, the round ligament to the posterior surface of the anterior sheath of the rectus muscle with chromicized catgut, thus leaving a strong fascia intact.

DISCUSSION.

Dr. Herman E. Hayd, Buffalo, questioned whether it is necessary to open the abdominal cavity for uncomplicated retroversion. If there is a complicated condition, such as an adherent retroverted uterus, diseased tubes and ovaries, with probably diseased appendages, then it is all right to open the peritoneal cavity, although there is great danger attending it. It is not a question of mortality altogether, but of future complications, because as the result of opening this cavity adhesions will take place. He has been compelled to open the abdominal cavity and operate for obstruction of the bowels in three cases simply from an operation in which he had opened the peritoneal cavity and did conservative work on the tubes and ovaries.

Dr. Albert Goldspohn, Chicago, regarded the Gilliam operation as the next best thing to the Alexander for shortening the round ligaments, provided all of the indications could not be met through the inguinal canal. No operation, aside from shortening of the round ligaments through the inguinal canal, the so-called Alexander operation, had such a column of cases collected that had stood what he called the double test of pregnancy as had the Alexander.

Dr. D. Tod Gilliam, Columbus, Ohio, said that the results of pregnancy following this operation were gratifying to him as they must be to anyone who had adopted the method. He was receiving reports from medical men all over the country with reference to the occurrence of pregnancy after this operation, and with one or two exceptions the patients had passed through pregnancy without any more trouble than under ordinary circumstances.

Analysis of Common Causes of Death Following Pelvic and Abdominal Operations.

Dr. Joseph Price, Philadelphia, said that post-operative complications and incomplete abdominal procedures perplex him more and more as he grows older, and give him the only mortality he now has in his cases. He told of operating on a case four months after an incomplete operation had been done in another hospital and finding a huge four-foot gauze towel anterior to the uterus. Post-operative sequelæ and deaths from gauze are very common. He is satisfied that they are thrice more common than from sponges. For a number of years he used sponges and valued them for clean work, for packing, or for a dry operation, and he believes viscera troubled him less than at the present time. He was then wholly ignorant of post-operative sepsis in his own work, and in that of his pupils. Had he now the time to take care of his sponges, he would go back to them, as highly as he values gauze. To his mind it is one of the most valuable materials in surgery. He spoke of the value of good nursing in the reduction of mortality rate.

A number of good operators attribute their low mortality wholly to the use of gloves. After adopting gloves he reduced his death rate to about nil, but his precautions were all redoubled. For example: After operating on a septic case, other operations were postponed for thirty-six to forty-eight hours.

Vaginal incisions and perforations favor a high mortality in later operations, made for the clean removal of the remaining pelvic pathology. Puriform tubes and ovaries, suppurating tubes and ectopic pregnancy seldom allow sufficient improvement in vital force and stamina to bear well the complete operation—suprapubic—after they have been incised through the vagina. Primarily they would all have been easy by complete methods and without mortality. The choice of method and material is of paramount importance to good work, and the suprapubic procedures, when complete and done early, drainage used when necessary, should, like the infrapubic, when done by one of the finished operators, like Jacobs, Segond or Pryor, give a mortality close to nil. He does a large number of vaginal hysterectomies for malignancy of the uterus, cervix or fundus, and for small fibroids without a death, and it is one of the easiest operations he is asked to do. In suppurative forms of tubal and ovarian disease he does not consider the vaginal route complete surgery, because the adherent omental and bowel adhesions and the diseased appendix are wholly neglected.

(To be continued.)

WASHINGTON STATE MEDICAL ASSOCIATION.

Fourteenth Annual Session, held at Spokane, Sept. 1-3, 1903.

The president, Dr. Charles McCutcheon, Tacoma, in the Chair.

Welcome.

About fifty physicians of the state were present at the opening session when Hon. W. F. Townsend delivered the address of welcome to the visiting members. The social features comprised a reception and dance at the Elks' Temple and a reception and musicale at the residence of Dr. and Mrs. N. Fred Essig.

Papers Read.

At the afternoon session of the first day papers were read by Dr. Guy S. Peterkin, Seattle, on "Acute Gonorrhea in the Male"; by Dr. Nathan M. Baker, Spokane, on "The Kidneys in Pregnancy"; by Dr. Park Weed Willis, Seattle, on "A Few Reasons for Early Operation in Gallstone Disease"; and by Dr. David DeBeck, Seattle, on "Rheumatic Chorioretinitis."

The second day was devoted to the reading and discussion of papers, prominent among which were "An Analytical Study of the Surgical Treatment in Prostatic Hypertrophy," by Dr. G. W. Hawley, Seattle; "Surgical Technic," by Dr. Elmer M. Brown, Tacoma; "The Pathology of Nephritis," by Woods Hutchinson, Portland, Ore., and "The Surgical Treatment of Bright's Disease," by Dr. Frantz H. Coe, Seattle.

A paper was read by Dr. Victor C. Vaughan, Ann Arbor, Mich., on "The Hygiene and Dietetic Treatment of Chronic Nephritis," which will appear in The Journal.

Typhoid Fever.

Dr. Victor C. Vaughan, dean of the medical department of the University of Michigan, delivered an earnest and practical address, the central thought being that a pure water supply ensured to the state is better than anything else in the prevention of typhoid. He urged his audience to see to it that its water supply is not contaminated. He said that the yearly deaths in the United States from typhoid fever numbered more than 50,000 and the cases more than half a million, causing an outlay estimated at more than $80,000,000. This sum, properly applied, said Dr. Vaughan, would forestall the appearance of the disease and would prevent many deaths and untold suffering now resulting from its ravages. He recommended that the Spokane officials secure absolute control of the water of the Spokane River and especially of that portion near the up-river plant. By so doing the city can control the water supply and ensure its purity. He dwelt on the contagious qualities of the disease and emphasized the fact that typhoid never appears except by infection, either direct or indirect, and that its prevention by careful watching of the water supply and other measures of less importance is far easier and better for the community than is disease eradication when it has once gained a foothold.

Resolutions Regarding Dr. Waughop.

The committee appointed for that purpose presented resolutions on the death of Dr. John W. Waughop, formerly of Chicago, who presided at the session held at Spokane in 1897, and who died on his way from Honolulu to the United States. The deceased was a prominent physician of Puget Sound, and had been a member of the state association almost from its beginning.

Election of Officers.

The following officers were elected: Dr. Frantz H. Coe, Seattle, president; Drs. William C. Cox, Everett, and George B. Wilson, Pullman, vice-presidents; Dr. James B. Eagleson, Seattle, treasurer; Drs. Elmer M. Brown, Tacoma, and Ralph N. Gordon, North Yakima, members of the judicial committee; Dr. Henry W. Dewey, Tacoma, delegate to the American Medical Association, and Dr. Robert L. Thomson, Spokane, alternate. Dr. Arthur H. Coe, Spokane, the secretary, has still two years to serve.

Next Meeting.

The invitation of the physicians of Seattle to hold the 1904 meeting of the society in that city was accepted.

ROCKY MOUNTAIN INTERSTATE MEDICAL ASSOCIATION.

Fifth Annual Session, held in Salt Lake City, Sept. 1-2, 1903.

The president, Dr. Charles H. Solier, Evanston, Wyo., in the Chair.

Welcome.

GOV. HEBER M. WELLS of Utah extended a hearty welcome to the society and paid an eloquent tribute to the medical profession. In the absence, on account of illness, of Dr. Alexander C. Ewing, Dr. Henry La Motte welcomed the association in behalf of the Salt Lake County Medical Society.

Program.

Among the notable papers on the program were a symposium on syphilis; papers on "Intubation" by Dr. Frank E. Waxham, Denver; "Treatment of Tuberculosis of the Lungs," by Dr. Edgar P. Hershey, Denver; "Operation for Chronic Nephritis," by Dr. Elias S. Wright, Salt Lake City, and "Volvulus of the Stomach," by Dr. Charles D. Spivak, Denver.

Banquet.

At the banquet held at the Commercial Club rooms about fifty physicians of the intermountain states were in attendance. Dr. Harry D. Niles, Salt Lake City, acted as toastmaster and toasts were responded to by Drs. Leonard Freeman, Denver, and Josiah N. Hall, Denver; R. Harvey Reed, Rock Springs, Wyo.; Donald Campbell, Butte, Mont.; Union Worthington, Salt Lake City; Samuel D. Hopkins, Denver, and Robert Levy, Denver.

Election of Officers.

The election of officers resulted as follows: President, Dr. Harry D. Niles, Salt Lake City; vice-presidents, Drs. Robert Levy, Denver, Colo., and T. J. McKenzie, Anaconda, Mont.; treasurer, Dr. Donald Kennedy, Denver; recording secretary, Dr. Henry La Motte, Salt Lake City, and corresponding secretary, Dr. George A. Moleen, Denver.

THE MEDICAL SOCIETY OF VIRGINIA.

Thirty-fourth Annual Session, held in Roanoke, Sept. 15, 16 and 17, 1903.

President, Dr. John N. Upshur, Richmond, in the Chair.

Welcome.

The first session of the society was held on the evening of September 15, when Mayor Cutchin, on behalf of the city of Roanoke, welcomed the visitors, and Dr. Merwin Branch, in behalf of the local profession, delivered the address of welcome. Dr. William S. Christian, Urbana, responded to the addresses of welcome in most pleasing style.

President's Address.

DR. JOHN N. UPSHUR, Richmond, devoted the greater portion of his address to reorganization. He referred to the report of the delegates from the society to the American Medical Association at the New Orleans meeting, and said that the society was now brought to the point where it would have to decide what action it would take regarding reorganization. The society had lived and prospered for many years and many of its older members were reluctant to see it relinquish any of its old landmarks. Still, the material interests of the profession and the future progress from a scientific standpoint demanded that the society should follow such a course as would not only increase its membership, but would give the profession of the state an influence in public affairs, especially those of a professional nature, and in the shaping of legislation which should make the organization a factor in the body politic to be not only felt but respected. Up to this time efforts to obtain legislation in matters of importance to the profession have met only such meager success as to be almost valueless, had been obtained by compromise or had been ignominious failures.

Report of the Delegates.

At the morning session on September 16 Dr. Stuart McGuire, Richmond, presented the report of the delegates to the American Medical Association. The committee states that the meeting was a great success, that the attendance was large, the scientific papers read of high order, the business of the Association satisfactorily transacted, and that the social pleasures were such as only New Orleans and her hospitable people could furnish.

Dr. McGuire then gave a summary of the principal proceedings.

Committee on Legislation.

DR. GEORGE BEN JOHNSTON, Richmond, made the report for this committee, endorsing the laws of the state governing the practice of medicine, which was enthusiastically received and a rising vote of thanks tendered the committee, which was instrumental in having passed the so-called "osteopath" bill.

New Constitution.

A great part of the time of the society was taken up by a spirited discussion on the adoption of a new constitution. This discussion, which was begun at the morning session of the second day, consumed the entire session of the afternoon and evening. Final action was postponed until the session of next year.

Advertising.

At its evening session the society decided that physicians might place business cards and advertisements of private hospitals in the newspapers.

Judiciary Committee.

DR. OSCAR WILEY, Salem, chairman of the Judiciary Committee, reported regarding Dr. Bittle C. Keister, Roanoke, that his course in advertisi [illegible] idence ar[illegible] diseases he treated has not been [illegible], with the [illegible] of the principles of [illegible] Willi[illegible] Shackford, Walkerton, the committee found that he had not been a member of the society since 1890, and they therefore had no jurisdiction. The charges of contract practice against Dr. H. L. Tutwiler, Singerglen, were sustained, he acknowledged his error and promised not to offend again.

Election of Officers.

At the afternoon session the following officers were elected: President, Dr. Joseph A. Gale, Roanoke; vice-presidents, Drs. William E. Anderson, Farmville, S. T. Anderson Kent, Ingram, and Israel Brown, Norfolk; recording secretary, Dr. Landon B. Edwards, Richmond (re-elected); corresponding secretary, Dr. John F. Wynn, Richmond; treasurer, Dr. Robert M. Slaughter, Alexandria; orator, Dr. William S. Gordon, Richmond, and delegate to the American Medical Association, Dr. George Ben Johnston, Richmond. Richmond was selected as the next place of meeting.

Entertainment.

The social features offered by the Richmond physicians included trips to Bedford and the Palisades of the New River, and to Fries, a reception given by Mrs. T. E. Lewis to the wives and daughters of the members, and a trolley ride, and a reception at the Country Club, also for the ladies. The annual banquet was held at the Hotel Roanoke.

Presentation.

Dr. John N. Upshur presented an ivory and ebony gavel to the society and Senator Harvey was presented with the pen with which Governor Montague signed what is popularly known as "The Osteopath Bill."

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Chronic Purulent Otitis Media.

The following combination is recommended by *Bul. Med. de Nantes* as local treatment for chronic otorrhea:

℞.	Resorcin	gr. xx	1	20
	Tinct. opii	gtt. xv	1	
	Aq. destil.	ʒii	8	

M. Sig.: A few drops to be introduced into the ear.

The ear should be thoroughly irrigated with a warm boric acid solution and dried with absorbent cotton. A few drops of the foregoing solution is then dropped into the ear and allowed to remain a few minutes.

According to Dench, in his treatise on "Diseases of the Ear," there are two objects aimed at in the treatment of chronic purulent otitis media:

1. To stop the discharge.
2. To relieve the subjective symptoms and to improve the hearing.

In order to accomplish these results the ear must be kept clean by irrigation. In irrigating the ear the patient must be carefully instructed as to the method of syringing or all the pus will not be removed. The ear should be drawn upward and backward, thus straightening the auditory meatus. The syringe should have a blunt nozzle, rendering it impossible to be carried into the ear far enough to do injury to the membrana tympani. The syringe should be directed downward and forward toward the tip of the nose. The fluid should be injected with moderate force and the temperature of the solution should be carefully observed, for if it is either too hot or too cold pain will be produced; so the patient should be the guide in choosing the proper temperature. Not less than one pint should be used at each irrigation. The author advises a 1-5,000 bichlorid solution, a saturated solution of boric acid or a 2 per cent. solution of carbolic acid. The patient should be instructed to wipe out the ear with small pledgets of cotton twisted about a small toothpick or metallic holder. He condemns the use of powders, as crusts may be formed and act as barriers to the outflow of pus. In the hands of experienced physicians, he states, astringent or stimulating powders are of value, especially after the discharge has greatly reduced and only a small amount of moisture remains. In such cases the insufflation of boric acid, zinc oxid, iodoform, or a mixture consisting of equal parts of alum and boric acid is of great service in entirely checking the secretion. Only a minute quantity must be used. If pain should again arise, the patient must be instructed to again syringe the ear and to follow out the same procedure if the discharge should set up again. If granulations form they may be touched up with chromic acid or silver nitrate fused on a metal probe. The use of chromic acid for this purpose is preferred.

In using the bichlorid solution some authors prefer the following combination in the treatment of otorrhea:

℞.	Hydrarg. bichloridi	gr. ss		03
	Acidi tartarici	gr. xx	1	30
	Aquæ	℥iv	120	

M. Sig.: To be used as a wash for the ear.

The powerful toxic character of the bichlorid should be remembered and care exercised in its use, no matter what strength solution is used.

In cases of moist eczema of the external auditory passages the following is recommended:

℞.	Alumenis (burnt)			
	Amyli, āā	ʒii	8	
	Zinci oxidi	ʒss	2	

M. Ft. pulvis. Sig.: To be used locally on the affected parts.

The following combination containing carbolic acid is recommended in the treatment of otorrhea:

℞.	Acidi carbol.			
	Plumbi acetatis, āā	gr. x		65
	Tinct. opii	ʒii	8	
	Aquæ	℥viii	240	

M. Sig.: Warm the mixture and irrigate the ear twice daily; or:

℞.	Acidi carbol.			
	Zinci sulph.			
	Plumbi acetatis, āā	gr. x		65
	Aq. destil.	℥viii	240	

M. Sig.: Inject into the ear night and morning.

Facial Acne.

In the treatment of acne of the face, according to Médicine Moderna, hot water should be applied locally, after which the following applications should be employed:

℞.	Hydrarg. bichloridi	gr. viiss-xv		50-1.00
	Eau de cologne	℥viii	240	

M. Ft. lotio. Sig.: Apply locally .

And as an ointment or cream the following is recommended:

℞.	Aq. rosæ	ʒss	2	
	Lanolini (anhydrous)	ʒiss	6	
	Aquæ	ʒiiss	10	

M. Sig.: Apply locally.

Laxative Combinations.

The *Presse Médicale* recommends the following combinations as serviceable remedies in correcting constipation in *adults:*

℞.	Extracti *frangulæ flu.*			
	Extracti cascaræ flu. āā	ʒvi	24	
	Glycerini	ʒiii	12	

M. Sig.: One or two teaspoonfuls at bedtime; or:

℞.	Ext. cascaræ	gr. 3/4		05
	Podophyllin	gr. 1/7		009
	Ext. hyoscyami	gr. 1/7		009
	Euonymin	gr. 3/7		025
	Pulv. saponis q. s.			

M. Ft. pil. No. i. Sig.: One or two such pills at bedtime; or;

℞.	Euonymin			
	Podophyllin, āā	gr. 3/10		02
	Ext. hydrastis Canaden.			
	Pulv. saponis, āā	gr. ss		03

M. Ft. pil. No. i. Sig.: One such pill at bedtime.

Chorea.

The following combinations are of value in the treatment of chorea, according to Yeo in his *Clin. Ther.*:

R.	Asafetidæ	gr. xx	1	30
	Ext. valerianæ	gr. xx	1	30
	Zinci oxidi	gr. x		65
	Ext. belladonnæ	gr. ii		12

M. Ft. pil. No. xx. Sig.: One or two, night and morning; or:

R.	Ferri reducti	gr. i-iii	06-.20
	Quininæ sulph.	gr. ii-v	12-.30
	Acidi arsenosi	gr. 1/50 to 1/30	0012-.0020

M. Ft. cap. No. i. Sig.: One such capsule after meals three times a day.

As a hypodermic injection the following combination is recommended:

℞.	Sodii arsenatis	gr. iss		09
	Acidi carbol.	m. iii		20
	Aquæ destil.	ʒiiss	10	

M. Sig.: Five minims to be injected daily.

Cerebral Arteriosclerosis.

The following outline of treatment is recommended by an abstract in the *N. Y. and Phila. Med. Jour.* in the treatment of cerebral arteriosclerosis:

℞.	Pulv. scammonii	gr. vi	40
	Pulv. jalapæ		
	Pulv. gutta perchæ, āā	gr. iiss	15

M. Ft. chart. No. ii. Sig.: One powder at bedtime; the second to be taken in twenty minutes.

These powders should be taken every ten or fifteen days. In the meantime the following is advised:

℞.	Pulv. aloes		
	Euonymin, āā	gr. 3/4	045
	Podophyllin	gr. 3/20	01
	Ext. hyoscyami		
	Ext. belladonnæ, āā	gr. 3/40	005
	Saponis q. s.		

M. Ft. pil. No. i. Sig.: One such pill at bedtime.

During three weeks of the month the following should be prescribed:

℞.	Pot. iodidi	gr. xlv	3
	Aq. destil.	℥x	300

M. Sig.: One tablespoonful twice daily after meals.

And during the remaining ten days the following should be substituted:

℞.	Theobromin.	gr. viiss	50
	Sodii benzoatis	gr. iv	25
	Lithii carb.	gr. iiss	15

M. Ft. cap. No. ii. Sig.: Two such capsules night and morning.

Drug Eruptions.

The following division of drug eruptions is made by Pernet, according to an abstract in *Amer. Med.*:

1. Erythematous, papular and urticarial eruptions. They may be caused by atropin, arsenic, quinin, copaiba, antipyrin, chrysarobin or mercury and iodoform locally. The diagnosis, according to the author, is not easy. From scarlet fever the differentiation is made chiefly by the mode of onset, the examination of the urine and the absence of corroborative symptoms. Multiformity of lesions is rather in favor of drug origin. The existence of a disease likely to be treated by one of the foregoing drugs, as gonorrhea (copaiba), headache (antipyrin), should be inquired into.

2. *Vesicular* and *bullous* lesions may be caused by antipyrin, quinin, arsenic, salipyrin, or the salicylates and less often by morphin, chloral or mercury. Iodids rarely cause bullas unmixed with pustules.

3. Pustular eruptions are most commonly due to bromids or iodids. The bromid rash has frequently been mistaken for syphilis. It must be remembered that bromids are found in many of the proprietary remedies,

4. Purpuric rashes may be caused by those drugs mentioned in the first paragraph.

5. Pigmentation is caused by arsenic, especially on those parts of the body not exposed to the air. [It is occasionally observed in cases of chorea treated by arsenic.]

The coal tar preparations have also been known to produce a permanent pigmentation of the skin. The silver salts may produce a blue discoloration.

Medicolegal.

Ten Thousand Dollars for Loss of Left Hand.—The Court of Civil Appeals of Texas says, in Texas & Ft. Smith Railway Company vs. Hartnett, that it has not been able to find a single case where damages have been adjudged any one in the amount assessed by the jury in this case, namely $15,000, for the loss of the left hand, and it holds $10,000 to be full compensation to a locomotive engineer for such loss and the physical and mental suffering incident thereto.

Answers of Applicant for Insurance as to "Serious" Illness.—The Court of Civil Appeals of Texas says, in Supreme Ruling of the Fraternal Mystic Circle vs. Crawford, that it seems to it that the answer of an applicant for life insurance on his own life that he has never had any serious illness should be considered as a mere expression of opinion as to the character of the sickness, and should not avoid the policy, even though such answer was untrue, provided, of course, the applicant did not know of its falsity. The form of the question necessarily calls for an opinion, and an agreement to warrant the truthfulness of the answer is no more than to warrant that the applicant will make a bona fide answer as to his opinion of the character of his ailment.

Indictable Conspiracy to Get Examination Questions.—In the case of the State of Washington vs. James G. Stewart and O. V. Lawson, the Supreme Court of Washington holds that a cause of action was stated by an information which alleged that these parties conspired to obtain from a member of the State Medical Examining Board a set of questions to be propounded at the ensuing examination for a consideration in money ($600); Stewart, it was agreed, was to prepare the answers and to deliver the questions and answers to Lawson, and it was understood that Lawson would thereby be enabled to fraudulently pass the examination, and would obtain from the board a license entitling him to practice medicine and surgery under the laws of the state. There was the intent then and there, on the part of each of the accused, to defraud and injure the people of the state, etc. It was stipulated in the case to be conceded that no person charged in or connected with the conspiracy charged in the information applied to or obtained from any member of the board a set of questions agreed on by the board to be propounded at the next ensuing examination; that no such application was made by any such person for a consideration of money or otherwise; that no member of the board was approached on the subject by any such person. The proof showed that Lawson and Stewart dealt with each other through an intermediary, one Braid. Stewart represented to Braid that he would obtain these questions and answers from one Dr. Wilson, whom he represented to be a member of the board. It developed during the trial that in all probability Wilson was a fictitious character. The Supreme Court holds that, so far as the stipulation was concerned, it could make no material difference whether the questions were obtained from the board or not, or whether they were obtained at all or not, as the offense charged was the unlawful agreement to so obtain them. It says that it appeared plainly from the testimony that the intent of the accused was to unlawfully obtain for Lawson the certificate or license desired. The crime was completed when they entered into the agreement to defraud the state medical board in the manner proposed. Neither the character nor the proper definition of a crime is dependent on the success or failure of the enterprise. Nor did it make any difference that Lawson thought that the medium through whom the questions and answers were to be obtained was Wilson instead of Stewart, or even that he thought that the name of the man with whom he was conspiring was Wilson instead of Stewart. The two men actually arranged the terms and conditions of the unlawful combination through the aid of the go-between, and they were as responsible as though they had dealt with each other in person. Accepting the definition of the accused, that to constitute an indictable conspiracy there must be a *combination* or agreement of two or more persons to commit some act known or recognized as an offense punishable as a crime or prohibited under penalties of statute, or there must be a combination and agreement between two or more persons to accomplish a lawful purpose by unlawful means, the court thinks the information and proof were sufficient. For, it says, while it was not unlawful to pass the medical examination or to attempt to pass it, the information alleged, and the proof showed, that the accused conspired together for the purpose of assisting Lawson to do a lawful thing in an unlawful manner. While not unlawful *in its nature*, it was unlawful in respect to the means to be used in accomplishing it.

Evidence of Inability to Bear Children Inadmissible.—In the case of Ricards vs. the Safe Deposit & Trust Company of Baltimore, where a childless couple, the wife aged 53 years and the husband several years younger, sought to have a property trust terminated in which any child born to them would have an interest, the Court of Appeals of Maryland was confronted with what it characterizes as the serious and delicate question of whether it was competent for the parties to prove by medical testimony that the wife was incapable of bearing children. The court says that there are some early English cases which upheld or sanctioned a presumption that a woman of this one's age was incapable of bearing children. The more modern English cases have not adopted or relied on this presumption. In Lawson on Presumptive Evidence, p. 302, it is said: "In a number of cases the English courts have acted on the presumption that a woman beyond a certain age is incapable of child-bearing. No case can be found in the American courts in which such a presumption has been given effect to." At best, such a presumption is speculative. It is, as the very term "presumption" implies, a mere inference and not a certainty; and it would be exceedingly unsafe to permit property rights to depend on so precarious a basis. But the proposition here went further. It did not contemplate reliance on a simple presumption. Physical conditions had been testified to by medical witnesses who had expressed the opinion that there was no possibility of the life tenant being the mother of children. Can such evidence be received in a court of justice to affect the devolution of property, or to divert the course marked out for it to follow? The admission of such evidence in a case like this, where the avowed purpose of the proceeding is to cut out or strike down an estate in remainder, would or might be productive of most disastrous results. If, because of physical degeneracy, atrophy or decay, a medical man may, in a controversy involving title to an estate, testify that a woman is incapable of bearing children so that a trust deliberately created for her benefit during her life only may be brought to an end, with a view of vesting an absolute interest in her, or so that the vesting of a remainder may be accelerated, no one can foretell to what lengths such a precedent would lead. A surgical operation extirpating the uterus, for instance, would make it absolutely certain that no issue could be borne. If proof like that here under consideration were admitted, on what principle could evidence showing that an operation of the kind indicated had been performed be excluded? And, if not excluded, what would prevent interested parties from resorting to such or similar operations, if by a resort to them a mere equitable life estate could be converted into an absolute interest? It is wholly immaterial whether the inability to bear children arises from natural or artificial causes. It is not the cause, but the fact, that alone controls the question, and the single fact to which the law looks is death. On a case of first impressions, as this case is, the court goes on to say that it is bound to examine and weigh the results that may lie beyond the narrow horizon of an isolated controversy, and to consider the moral aspects of the situation, in reaching a conclusion which, when reached, may be fraught with such dangerous and demoralizing consequences. It is obviously not the province of courts of justice, and especially courts of equity, to encourage in any way a resort to a method like this for defeating a settlement or terminating a trust. If the evidence set out in the record should be received, no line could be drawn restricting or marking its limits, and no satisfactory reason could be given for the exclusion of the other species to which allusion has been made; and, if the latter sort of evidence be admitted, a court of conscience would be made the instrument for the promotion or encouragement of acts most manifestly subversive of good morals. And the court says that even had the question as to the admissibility of this kind of testimony been decided in other jurisdictions adversely to the view it takes, it should feel constrained, on grounds of a sound public policy, to exclude the testimony in a contention like this.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal.

September 19.

1 *The Pathology and Treatment of Rheumatoid Arthritis. Edward M. Merrins.
2 *Birth Palsies. M. H. Bochroch.
3 The Results of Brain Surgery in Epilepsy and Congenital Mental Defect. (To be concluded.) William P. Spratling.
4 *Some Anatomical Varieties of Inguinal Hernia. George R. White.
5 The Etiology and Treatment of Subacute and Chronic Catarrhal Affections of the Upper Air Passages in Children. James A. Patterson.
6 *Observations on 100 Cases of Gastrointestinal Diseases Treated at the French Lick Springs. George D. Kahlo.

1. *Rheumatoid Arthritis.*—Under this head Merrins understands a constitutional polyarthritic disease, most frequent in women, commencing at the periphery and advancing symmetrically towards the trunks, accompanied with irregular fever, pain, anemia, vasomotor disturbances, deranged reflexes, muscular atrophy, tremor and cramps, and in children with splenic and lymphatic enlargement. Recent investigations indicate that the trouble is first in the synovial membrane, accompanied with effusion, then involving the capsule of the joint with erosion of the bone, contraction of fibrous tissue and rarefying osteitis. Ankylosis is usually fibrous, but may be bony. The etiology seems sometimes to have been a rheumatic attack, but more often follows some acute infectious disease, menstrual disturbances, absorption of toxins, cystitis and especially nervous depression. He thinks it is a condition due to toxins liberated in the system, not from a single germ, but from many infections, with impaired nervous vitality as a dominating predisposition. The germs and toxins which produce the arthritis exert at the same time a selective poisonous action on the nervous system. It occurs more frequently in persons with the rheumatic diathesis or with nervous systems that have been impaired by physical injury, shock, worry or anxiety. The history and general clinical aspect point to chronic poisoning rather than to the direct action of a specific germ. There are a few cases *closely resembling rheumatoid* disease which seem to depend wholly and directly on some functional or organic disorder of the nervous system, since they can not be traced to any source of infection. The treatment consists in removal of all sources of toxic absorption and the elimination of poisons from the system by baths, etc., the administration of medicines which check intestinal fermentation and the *repair of the ravages of the disease by a liberal diet* and restorative and tonic medicines. In extreme cases surgery is advised to obtain movement in the ankylosed limb. For the relief of pain he suggests the use of heat by salt or sand bags, the use of liniments, blisters to the spine or cold applications and, as a last resort, drugs. In the early stages much can be done to arrest the disease and bring about recovery. Later it is very intractable, but much can still be done to relieve the patient.

2. Birth Palsies.—Bochrock remarks that in spontaneous labor we should not be in too great haste to deliver the trunk, and traction on the head should not be made except in case of

necessity. If the axilla is hooked traction should be mild. In forceps extraction, expression should be used and one should remember the Walcher position and bring the forceps not far outside the direction of the axis of the body. Slight pendulum movements may be used, but extreme ones avoided. During extraction by means of the feet, the arms should be quickly attended to, in case they are interfering, by the Mauriceau procedure; resorting in grave cases to expression, and, if necessary, to Walcher's position. If the extraction of the head offers considerable difficulties, it is an indication for the application of forceps to the aftercoming head to avoid stretching of the axillary nerves. The treatment of brachial palsies may be both surgical and medical. In some cases where the nerves are torn, suturing should be indicated, though whether it can be carried out is a question. Treatment of brachial palsy once established resolves itself into the use of massage and electricity. In some cases the paralysis disappears, but this is not the rule when the condition is marked. The arm should not be allowed to hang helpless at the side, but should be supported in a sling or a Velpeau bandage.

4. **Hernia.**—White describes the different forms of inguinal hernia depending on the condition of the peritoneal diverticulum, whether closed or not, such as congenital hernia when the tunica vaginalis remains patent; congenital funicular hernia when the middle of the canal is closed but not obliterated; infantile or encysted hernia when a pouch of the peritoneum from the abdominal cavity is pushed down into an abnormally large cavity of the tunica vaginalis, and the ordinary acquired hernia.

6. **Gastrointestinal Diseases.**—Kahlo describes the effects of the waters of the French Lick springs at West Baden on gastrointestinal diseases. He finds the best results in chronic gastritis with deficient secretion and excessive mucus, also in cases complicating hepatic cirrhosis and nephritis, except in one case where there was evidence of marked renal degeneration. Myasthenia and hypersthenic gastritis are not so well affected, but are not contraindications. The majority of purely nervous myasthenics were benefited, probably due as much to the environmental and hygienic influences as to the water. Colitis of the mild type with constipation showed considerable improvement. Constipation due to atony was markedly improved. In enteritis of the severe type he does not think the waters indicated. He has seen albuminuria and glycosuria disappear in some cases, but he can not say as to the duration of the cure. Persons should exercise freely while drinking the water. It should be taken not less than one hour before or two hours after meals. It is also important to obtain a complete evacuation of the bowels early in the treatment. He gives analyses of the different springs and a description of the accommodations. The diet should be regulated. Alcohol is naturally contraindicated and he warns against the overuse of the waters.

Medical Record, New York.

September 19.

7 *Differential Leucocyte Count in the Early Days of Typhoid Fever. Henry A. Higley.
8 A Case of Leucosarcoma of the Choroid. Thomas R. Pooley.
9 The Range of Osteoplasty as an Aid in the Conservative Surgery of Bone Traumatism. Thomas H. Manley.
10 *Some of the Mistakes We Have Inherited. Mark I. Knapp.
11 Early Symptoms of Dementia Precox. A. R. Diefendorf.

7. **Typhoid Fever.**—Higley finds that many cases of typhoid fever, contrary to the common notion, showed a characteristic differential leucocyte count within the first week of the disease. The value of the differential leucocyte count in the early diagnosis of typhoid is as yet a question, but it seems certain that when used in addition to the total leucocyte count more information may be obtained than by employing the total count alone. He gives blood counts of a number of cases of malarial fever and reports in some detail the counts and reactions in several cases of typhoid.

10. **Mistakes We Have Inherited.**—Knapp questions whether vomiting is ever a reflex phenomenon, and considers it always due to gastric irritation, the direct cause always lying within the lumen of the alimentary canal, no matter what outside cause there may be. Green vomit in the majority of cases does not mean bile but the growth of green mold, and chocolate-colored vomit need not necessarily mean blood, but may mean red mold. Of course, either of these may coexist with bile or blood. Another mistake he calls attention to is trusting too much to the appetite as a sign of healthy gastric conditions, and still another is the dietetic value of stale bread. It is not the freshness of the bread that harms, but the quantity. Too much is taken. Constipation from dietetic causes is noted as a condition in regard to which we have erroneous views. We are inclined to prescribe too much fruit, whole-wheat flour, sweets, etc., in these cases. They are liable to produce gaseous fermentation and irritation and may be decidedly injurious and help to produce organacidia gastrica or organacidia enterica, which he proposes later to describe. What may be beneficial in small quantities becomes absolutely dangerous when taken in large amounts, and once recommended they are liable to be taken in excess.

Medical News, New York.

September 19.

12 *The Etiology and Chemical Pathology of Gallstones. C. A. Herter.
13 *The Modern Treatment of the Acute Suppurations of the Knee Joint. Arpad G. Gerster.
14 *What Ought We to Expect from Cardiac Drugs in Heart Weakness. O. T. Osborne.
15 *A Study of Good Results in Hip Disease. V. P. Gibney.
16 *Chronic Nephritis without Albuminuria. Arthur R. Elliott.

12.—See abstract in The Journal, xl, p. 1598.

13. **Suppuration in the Knee Joint.**—Gerster describes the different forms of gastric suppuration, metastatic or pyemic, that due to osteomyelitis and traumatic suppuration. He speaks very highly of the Mayo incision as the best method for reaching and draining the parts, especially in osteomyelitic cases.

14. **Cardiac Drugs.**—Osborne describes the various cardiac tonics, naturally putting digitalis in the first place. He thinks it is, as a rule, indicated in chronic cardiac weakness, except when due to myocarditis or fatty degeneration. In acute endocarditis complicating acute rheumatism it is hard to say whether it should or should not be used, but its slowing of the heart is likely to do good. In the feeble heart of myocarditis it is a question whether it is to be used. We should not deny the patient the possible benefit where it seems to be of value, though its action should be closely watched. It should not be used in endarteritis or atheroma, and ordinarily not in aneurism. It is often a good soporific in the insomnia of neurasthenia. No fixed rule can be given as to its use in renal inflammation. It is of benefit in the anemic edema of the lower extremities and effusion without kidney lesions, and in chronic liver disease it is always of benefit combined with other treatment. In uremic poisoning or low vasomotor tension with weak heart, digitalis should be cautiously tried. If it does not give good results in 36 to 48 hours it should be stopped. Its contraindications are high tension of the arteries, atheroma, weak cardiac muscle and ordinarily a serious kidney lesion. The best substitute for it is strophanthus, which can be used when a cardiac tonic is needed, and digitalis produces nausea and vomiting or the blood pressure is high, and when a rapidly acting tonic is desired, when there is more nervous irritability and heart weakening than actual muscular debility or incompetency, and in children who are very susceptible to digitalis. Spartein sulphate is a substitute for digitalis, which can be used in case of irregularity and nervous irritability of the heart with general nervousness. Muscle or fatty degeneration of the heart, low pulse tension and dilatation or cardiac weakness contraindicate it. Cactus does not increase the cardiac strength as does digitalis, but has no cumulative action and does not wear itself out. Convallaria and adonidine have been unsatisfactory in his experience. Suprarenal acts as a vasomotor and cardiac stimulant only when absorbed from the nose or mouth, not by the stomach. Strychnin Osborne considers overused at the present time, but he speaks highly of caffein, as a cardiac, cerebral and muscular stimulant and as a diuretic and an antidote in poisoning. Its contraindications are palpitation, irritable heart, high blood pressure, cerebral or spinal inflammations or irritations, in-

somnia, neurasthenia and acute genitourinary inflammations. As to alcohol, he thinks in small doses it may be of value in relieving the heart by its vasodilator action, though too large doses are contraindicated. It should be given concentrated. To combat continuous cardiac failure or depression, alcohol is the poorest stimulant we can use and exaggerates the depression. He has also obtained as good circulatory results in sthenic fever from small doses of nitroglycerin as he has from alcohol. The narcotic effect of the latter in certain serious feverish conditions may, however, be of advantage.

15. **Hip Disease.**—Gibney discusses what are and are not good results in these conditions, and thinks that we should seek for the best results, that is, as full a restoration of function as possible. Where the treatment has been too long delayed and the head and neck of the femur have suffered severely, fair results may be obtained by attention to details, though fine results are hardly to be expected. In the later stages we have to be content with correcting the deformity and eradicating necrotic areas and sinuses. Results that will satisfy can be obtained if we maintain the best position of the limb.

16. **Chronic Nephritis Without Albuminuria.**—Elliott reports cases and points out that chronic interstitial nephritis may have latency of symptoms through the entire course of the disease, though this is most likely in the early stages. It does not constitute a point of absolute distinction between the early and advanced stages or between the mild and severe forms. Albuminuria is very frequently absent during the early stages and may be up to the end or through the entire course of the disorder. It is a very unreliable diagnostic sign. More dependence can be placed on the diminution of urinary solids and especially on the presence of casts. Chronic interstitial nephritis never exists as a clinically recognizable condition without casts in the urine. The secondary circulatory changes following the disease are so characteristic as in most cases to furnish ground for its recognition before the urine is examined. The inconstancy of the urinary symptoms puts them much in the same diagnostic category as murmurs in valvular heart disease.

American Medicine, Philadelphia.

September 19.

17 *Labia Urethræ and Skene's Glands. (Concluded.) Howard A. Kelly.
18 *The Rational Treatment of Pulmonary Tuberculosis, with Report of Cases. F. M. Pottenger.
19 *The Treatment of Chronic Round Ulcer of the Stomach. Frank H. Murdoch.
20 The Bacillus of Syphilis. Justin DeLisle.
21 *Placenta Previa and Its Treatment, with Special Reference to Combined Version. Daniel Longaker.
22 A Contribution to the Prophylaxis of Venereal Diseases. G. Morgan Muren.
23 English Surgery as Practiced by Richard Wiseman, Sargeant Chirurgeon, in 1676. John D. Singley.

17. **Labia Urethrae and Skene's Glands.**—Kelly's article is finished in this issue. He thinks he has made clear the following points: 1. That one often finds definite labia overlapping the urethral orifice. 2. That their function is protective and in part sexual. 3. That attention must be more regularly directed to Skene's glands. 4. That these structures are veritable glands (Schüller). 5. That their function is to lubricate the labia urethræ and is also largely sexual. 6. He calls attention to the simple method of constructing a hairpin speculum to expose the orifices of these glands, and 7, presents a simple and safe method of injecting them, a decided improvement over the hypodermic syringe. 8. He also calls attention to 2 cases in which smegma bacilli in large numbers were lodged in the glands.

18. **Pulmonary Tuberculosis.**—Pottenger insists on the value of pure, moderately dry, aseptic air, a maximum of sunshine, freedom from storms, a dry porous soil, a liberal diet with a maximum of nourishment, and a minimum expenditure of digestive energy. The use of hydrotherapy, especially the cold morning rub, is also advised with regulated exercise and a general regulation of the habits of life. He thinks serum therapy in this disease is of decided value and increases the patient's chances of cure at least 20 per cent. Direct medication of the air passages, while it can not be considered curative, in many cases alleviates symptoms. He mentions intratracheal injections of menthol, olive oil, camphor and iodoform or izal from 1 to 10 per cent. in Price's redistilled glycerin. The pneumatic cabinet is also mentioned as a useful adjunct of treatment. Drugs are of secondary importance, but for the correction of symptoms cinnamic acid seems to him of some little benefit, though his experience is limited. Ichthyol apparently facilitates expectoration and aids digestion in some cases. Creosote and creosotal he only uses for intestinal putrefaction, and he also employs creosotal in pneumonia. Aside from this his drugs are mainly stomachics, intestinal antiseptics and general tonics where they are indicated. He gives his results in detail.

19. **Gastric Ulcer.**—Murdoch thinks, that women suffering from gastric ulcer require absolute rest in bed, and if this is impossible they should dispense with corsets and tight waistbands and keep as quiet as possible. Men, on the other hand, with chronic gastric ulcer do not ordinarily require rest, and manual laborers even get along without quitting their work. Brain workers must be relieved of their mental work and worry, at least during the early months. The condition of the gastric secretion must be looked after unless there are other reasons than the ulcer for not passing the stomach tube. If free or normal hydrochloric acid is found milk must form the principal article of food and be given with other liquid foods. He speaks well of bismuth and silver nitrate in chronic gastric ulcer when there is hyperchlorhydria or achylia. This last probably acts by producing a thin film of coagulated albumin over the inflamed and sensitive mucous membrane around the sore. He does not believe in discontinuing the liquid diet until epigastric tenderness has disappeared, the time varying from four weeks to very much longer periods. The complications of hemorrhage and perforation are noted. In the former he advises absolute rest in bed, ice, either by the mouth or rectum, an ice bag applied to the epigastrium, and nourishment should be given by the bowel. In case these are insufficient, gelatin injections by the mouth and adrenalin are suggested. In persistent hematemesis Ewald's recommendation of washing out the stomach with ice water should be tried, but if all these fail, operation should be considered.

21. **Placenta Previa.**—Longaker reports 11 cases treated by the plan of combined version first introduced by B. Hicks with the result of 6 babies born alive. He thinks we do well in these cases not to hurry the birth after turning.

Boston Medical and Surgical Journal.

September 17.

24 The Ill Health of Francis Parkman. George M. Gould.
25 *Minor Surgery in Country Practice. Clifford S. Chapin.
26 *The Dietary Treatment of Constipation. Henry F. Hewes.
27 Hyperchlorhydria. Roscoe W. Swan.
28 A Mastoid and Auricle Retractor. Frederick L. Jack.

25. **Minor Surgery in Country Practice.**—Chapin suggests the importance of a thorough knowledge by the country practitioner of bandaging aseptically and antiseptically, and also the necessity of knowing how to do strapping and do it well. The advantages of understanding the technic of poultices and intravenous injection and infusion of saline solution are also mentioned. The necessity of the country doctor knowing something about the proper method of anesthetizing is important and he thinks is neglected. It is, moreover, essential for him to know how to meet hemorrhage and shock, and Chapin gives details. There are certain operations in which teaching has been deficient such as in the treatment of fractures. He insists also on a thorough knowledge of the management of strangulated hernia which is essential in emergencies.

26. **Constipation.**—The factors bearing most directly on the physiologic function of the intestines are enumerated by Hewes, such as the habit of a regular period of defecation, a proper amount of physical exercise and a proper diet. The physician must at the start advise as to these. The first two explain themselves. As regards the latter he points out the necessity of having a proper selection of foods containing sufficient unabsorbed residue, and gives a diet list for constipation. Fats may also be of use if taken in considerable quantity, and foods which contain or generate considerable quantities of organic acids which by their action on metabolism or the

nerve centers after absorption increase the intestinal activity, such as tamarinds, prunes, plums, etc., and certain vegetables. His patients were advised to give up drugs and are instructed as to exercise and the necessity of following a diet list made up according to the indications mentioned above, such as whole-wheat or rye bread, cabbage, beets, turnips or lettuce, and prunes or tamarinds for dessert. Enemata were used when necessary at the start. The diet was kept up from one to two weeks, and in some cases prunes stewed with senna were prescribed (1 ounce of senna leaves stewed with 3 or 4 dozen prunes). In some special cases a fat excess in the diet was prescribed. He says in the very large majority of cases of constipation the chief and possibly the only cause is failure to follow a normal physiologic manner of life. In such, a complete cure can be obtained by a proper direction of general régime and diet.

Cincinnati Lancet-Clinic.

September 19.

29 *A Case of Basicranial Fracture Followed by Status Epilepticus and Death. H. S. Allen.
30 Charlatanism. George J. Monroe.
31 Surgery of the Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued.) B. Merrill Ricketts.

29. **Status Epilepticus.**—Allen reports a case of an epileptic patient who suffered from a fracture of the base of the skull during a fall in a fit, and which was followed by fatal status epilepticus. He discusses the latter condition and its mortality, which is very high.

St. Louis Medical Review.

September 19.

32 Report of Tetanus Cases. William S. Deutsch.

Bulletin of the Johns Hopkins Hospital, Baltimore.

August.

33 Bichat. William S. Thayer.
34 Some Early Autopsies in the United States. Walter R. Steiner.
35 A Case of Neuro-fibromatosis (von Recklinghausen's Disease) with Paralysis and Muscular Atrophy of Arms and Legs. H. M. Thomas.
36 *The Cure of the More Difficult, as Well as the Simpler Inguinal Ruptures. W. S. Halsted.
37 *The Pathology of Smallpox. William Royal Stokes.

September.

38 The Quality of Thoroughness in Nurses' Work. Isabel Hampton.
39 *The Anatomy of the Pancreas. Eugene L. Opie.
40 Uncinariasis; Report of a Case of Infection with the American Species. Thomas R. Boggs.
41 Solitary Tubercle of the Stomach. Roy McL. Van Wart.
42 The Control of Hemorrhage Following Pelvic Operations by Packing the Pelvis with Gauze Through a Proctoscope and Maintaining Counter Pressure by Packing the Vagina. John A. Sampson.
43 *Note on the Discovery and First Use of the Stomach Tube by an American Physician. Julius Friedenwald.
44 *On a Rapid Method of Staining Neuroglia. Roy McL. Van Wart.

36. **Hernia.**—In this paper Halsted calls attention to certain special points, such as excision of the veins, utilization of the right rectus muscle to close the lower part of the right inguinal canal, and utilization of part of the cremaster muscle, which was formerly cut away. The illustrations explain almost better than the text, but the steps of the operation are given as follows: 1. Division of the aponeurosis of the external oblique and reflection of the flaps. 2. Splitting of the cremaster muscle and fascia a little above the center of the cord. 3. Freeing the internal oblique muscle as much as possible. Here it may be advisable to make relaxation cuts in the anterior sheath of the rectus muscle under the aponeurosis of the external oblique, but doing this after sewing of the internal oblique to Poupart's ligament is begun when the tension can be better gauged. 4. When the veins are large, as is usual, they should be excised with very great care to avoid even the slightest extravasation of blood, avoiding any handling of the vas deferens if possible. 5. Ligation of the sac by transfixion or purse-string suture at the highest possible point. 6. Use of the lower flap of the cremaster muscle and its fascia by drawing it up under the mobilized internal oblique, holding it in position by fine silk stitches, which, having engaged firmly a few bundles of the cremaster, perforate the internal oblique, preferably where it becomes aponeurotic and are tied on the external surface of the latter. 7. Mobilization of the internal oblique, possibly further release by incising the anterior sheath of the rectus muscle. 8. Overlapping of the aponeurosis of the external oblique muscle by the so-called Andrew's method. 9. Closure of the skin with a buried continuous silver suture and covering of the incision with five or six layers of silver foil. It is unnecessary to dress or examine the wound closed in this manner for two weeks, when the wire may be withdrawn. The patients are kept in bed from 18 to 21 days. If during the dissection of the sac the cord is torn from its bed and subjected to traumatism and the testicle withdrawn from the scrotum, the veins should not be excised. In such cases Halsted would advise the transplantation of the vein alone. In children the veins should not be excised, as the probability of atrophy is greater than in adults.

37. **The Pathology of Smallpox.**—Stokes reports and illustrates the findings in smallpox, which he summarizes as follows:

> Although we have only studied five cases of smallpox at autopsy, yet some conclusions can be drawn from the work. The early skin lesions indicate that the primary infection in smallpox takes place in the lungs, probably by inhalation. The poison, when it enters the circulation, shows a selective influence on the epithelium of the skin and respiratory tract, and many cases are probably not further affected. The serious and fatal lesions of smallpox are caused by the secondary infection from the skin and respiratory tract, and the infectious agent is usually the streptococcus pyogenes. This organism is so distributed throughout the lesions as to explain most of the visceral changes, such as thrombosis, local necrosis and the various pulmonary changes. This streptococcic septicemia is the most striking feature of fatal smallpox, and if it were possible to overcome this condition by a special serum, the mortality from the disease would be greatly reduced.

39. **The Pancreas.**—Opie describes the anatomy and histology of the pancreas and calls attention in conclusion to the fact that the organ consists of two functionally diverse elements—on the one hand, cells which supply to the intestine important digestive ferments, and on the other hand, cells having no communication with the ducts of the gland, but an intimate relation to the blood vessels. In the second place, he also calls attention to the fact that the close anatomic relation of the pancreatic duct to the common bile duct favors transmission of the morbid processes from the liver to the bile passages and the pancreas.

43. **The Stomach Tube.**—Friedenwald points out that the invention of the stomach tube is to be credited to Dr. Philip S. Physick of Philadelphia, rather than to Jukes and Bush, who have been considered its inventors. He brings forward evidence and seems to make the case clear that Physick used the tube as early as 1800, and published the report of successful results with it in 1812, while the work of the English inventors first appeared in 1823.

44. **New Neuroglia Stain.**—Van Wart recommends the following process as a rapid method, possessing the advantages over the Mallory technic that it can be applied to any formalin-fixed tissue without prolonged special preparation and only requires a few minutes:

> 1. Fix in 10 per cent. formalin (4 per cent. formaldehyd). The tissue should be obtained within ten hours of death and fixed, preferably in small pieces. 2. Embed in paraffin (preferably the anilin oil method). 3. Cut 5/15 micra sections and mount on slides in the usual way. 4. Remove the paraffin by means of xylol, absolute alcohol and 95 per cent. alcohol. 5. Cover the section with a saturated aqueous solution of picric acid for two minutes. The section should be of a deep yellow color. 6. Wash in water. 7. Cover the section with a 10 per cent. aqueous solution of ammonium bichromate for two minutes. The yellow color should be completely removed. If not, repeat. 8. Wash in water. 9. Stain five minutes in a mixture of 8 c.c. of crystal violet saturated solution in alcohol (95 per cent.) and 42 c.c. of anilin oil water, made by shaking 5 c.c. of anilin oil with 95 c.c. of distilled water and filtering. This solution should be freshly prepared. A similar solution of gentian violet or methyl violet may be used, but the stain is not so intense. 10. Wash in water and blot. 11. Cover a 5 per cent. solution of potassium iodid, which has been saturated with iodin, one minute. 12. Wash with water and blot until the section is dry. If all the water is not removed the differentiation will be imperfect in the portions containing water. 13. Differentiate in anilin oil and xylol, equal parts. 14. Wash thoroughly in xylol. 15. Mount in balsam. The sections if not exposed to light will keep well. The portions of the section where the neuroglia is abundant are of a deep violet color. The rest of the section is nearly colorless. The method is based on that of Mallory.

Transactions of the Chicago Pathological Society.

May 11 and June 8.

45 *Blood Cultures in Lobar Pneumonia and Agglutination of the Pneumococcus. Edward C. Rosenow.
46 *A Statistical Study of the Postmortem Findings in 171 Cases of Lobar Pneumonia. Ellis Kirk Kerr.

47 Demonstration of a Dissecting Aneurism of the Root of the Aorta Involving the Walls of the Heart. Frederick Tice.
48 The Effects on Streptococci of Blood Serum from Cases of Scarlatina. George H. Weaver and G. F. Ruediger.
49 A Study of the Hemolysis of Rabbit's Blood Corpuscles by Human Serum in Various Diseases, Especially Erysipelas. D. E. W. Wenstrand.
50 *A Fever Following Rat Bite. W. A. Evans.
51 The Action of Certain Ions on the Lysins in Human Serum. Ludvig Hektoen.
52 Network Formations in the Right Auricle, with Demonstration of a Specimen. E. R. LeCount.

45. **Blood Cultures in Pneumonia.**—Rosenow finds that with improved technic and the using of large quantities of blood for inoculation the pneumococcus can be recovered in all cases of pneumonia, and in obscure cases the blood culture may be a valuable diagnostic aid. The pneumococcemia in pneumonia does not mean a specially unfavorable prognosis. On account of the difficulties involved agglutination of the pneumococcus is at present of scientific, rather than of practical, value. Normal and pneumonic blood serum appear to have no bactericidal influence on the pneumococcus. His studies do not settle the question whether lobar pneumonia is the primary result of direct local infection or secondary localization in the lung.

46. **Pneumonia.**—From a study of 171 cases Kerr finds that the age of maximum frequency of deaths from pneumonia is from 35 to 40 years, while that of the greatest number from all causes is between 40 and 50. Fatal cases are somewhat more frequent in males. Unilateral cases predominate, the right side over the left and the lower over the upper lobe. Crossed pneumonia is rare. The majority of cases reach the stage of gray hepatization, and while abscess and gangrene are uncommon, pulmonary edema and bronchitis are frequent. Acute parenchymatous changes occur in the parenchymatous organs with marked frequency. The serous membranes are involved in the following proportion: pleuritis, 70 per cent.; pericarditis, 12 per cent.; endocarditis, 8 per cent.; meningitis, 6 per cent.; peritonitis, 5 per cent.; and arthritis, very rarely. Pericarditis occurred with pneumonia of the lower lobes in all but two cases, and of the right middle lobe in these two. The preponderance of vegetative endocarditis and the preference for the mitral valves in this series differs from the usual experience; the frequency of meningitis associated with endocarditis is also noteworthy. Jaundice in pneumonia does not seem to be accompanied by any uniform change in the liver. Kerr notes the importance of pneumonia as a terminal infection. The presence of chronic pathologic lesions in a large number of cases is remarkable. These are mostly of importance from a prognostic point of view.

50. **Fever Following Rat Bite.**—Evans has seen 3 cases of this fever, and has looked up the literature, finding 2 cases reported in European circles, while 15 appeared in American and 38 in Japanese journals. There are also slight references to others. He reviews the literature and analyzes the symptoms as they appear. The disease seems to come on late, in a large proportion of cases after a number of days, though the incubation period varies, and the duration of the fever may be weeks and months. The wound usually heals promptly. In general, after an interval of 10 to 21 days the fever appears, with pain, swelling and some discoloration at the point of bite. There is some chilliness and a general neuralgia and rather noticeable sweating. The peculiarity of the fever is its tendency to intermissions, which may last for days and weeks, and the patient feel well in the interval. Local glandular enlargement is marked; there may be a general adenopathy. Three deaths probably from this cause are recorded. The pathology, so far as known, is rather negative, except hyperemia of the cord and the increased cerebrospinal fluid in Miura's case. Suppuration either in the wound or glands has not been noticed of recent years under modern treatment.

Archives of Ophthalmology, New York.

September.

53 Clinical Contributions to the Knowledge of Rare Affections of the Conjunctiva and Skin of the Lids. J. v. Michel.
54 *Epiphora as an Initial Symptom of Basedow's Disease. E. Berger.
55 *Experiments on Endogenous Infection of the Eye. J. Zelenkovsky and M. Wolzechowsky.
56 *The Value of Ophthalmic Examinations in the Differential Diagnosis Between Typhoid Fever and Acute Miliary Tuberculosis. Clarence Loeb.
57 Buphthalmos in a Subject of Congenital Dislocation of the Crystalline Lens. F. W. Marlow.

54. **Epiphora in Basedow's Disease.**—This symptom is considered by Berger in the case he reports as a secretory neurosis of the lachrymal glands similar to the other secretory neuroses of Basedow's disease. He rejects the mechanical explanations that have been offered. If this theory is correct, of course sounds and astringent injections are useless. The best treatment is that which relieves the general symptoms as well as the epiphora, though in obstinate cases perhaps the internal use of atropin or local instillations of cocain might be tried. For annoying dryness of the ball he has suggested the instillation of sterile salt solution, which has been employed with good results.

55. **Endogenous Infection of the Eye.**—The important facts deduced from the investigations of Zalenkovsky and Woizechowsky, as mentioned on page 819, are that in experimental endogenous infection of the eye the vitreous is a more favorable soil for the propagation of bacteria that have gained entrance than the aqueous, but that the entrance of bacteria is effected with more difficulty. The bacteria circulating in the blood can enter the aqueous and the vitreous in the absence of all inflammatory, embolic, or thrombotic processes in the vessels of the eye; their trophic action on the vessel walls is sufficient to permit their passage, but these conditions favor it.

56. **Typhoid Fever and Miliary Tuberculosis Differentiated.**—Loeb reports a case of general miliary tuberculosis, and to some extent discusses the literature. He finds that tubercles occur on the choroid probably in at least 50 per cent. of the cases of general miliary tuberculosis, though their absence does not disprove the presence of the general process. When present, especially when the development can be followed with other characteristic symptoms, they are pathognomonic of general miliary tuberculosis, and in cases of supposed typhoid fever running an atypical course, especially when the Widal reaction is negative, the eye should be examined. The presence of tubercles may not affect the therapeutis, but there are cases where a correct diagnosis is important from the forensic standpoint as well as being otherwise satisfactory.

American Journal of Obstetrics, New York.

September.

58 A Case of Pregnancy in a Dwarf Weighing 39 Pounds; Abdominal Hysterectomy. W. G. Willard.
59 *The Surgical Treatment of Puerperal Infection; a Part of the Symposium on Puerperal Infection. H. J. Boldt.
60 *The Bacteriology of the Puerperal Uterus; Its Relation to the Treatment of the Parturient State. S. Marx.
61 *The Treatment of Puerperal Sepsis. Hiram N. Vineberg.
61½ Uterine Myomas. William H. Baker and W. P. Graves.
62 *Postoperative Cystitis in Women. G. Kolischer.

59. **Puerperal Infection.**—The conclusions of Boldt's article are given as follows:

> In the acute form of puerperal septicemia and pyemia in which it is probable that the general circulation has been invaded by micro-organisms, whether a bacteriologic examination of the blood at the time of making the examination proves this or not, no method of surgical intervention is of benefit; on the contrary, it is likely to shorten life. In all puerperal infections the form of surgical intervention, if one be indicated, must be left to the judgment and conscientiousness of the physician, and the prognosis will vary according to the condition to be combated. With our present knowledge no strict rule by which one should be governed can be laid down.

60. **The Bacteriology of the Puerperal Uterus.**—Marx concludes that the normal puerperal uterus is a sterile organ. The presence of bacteria in the absence of general evidence of constitutional disturbance, means the introduction of such bacteria by accidental contamination. Their presence in the uterus accompanied by fever means in all probability sepsis arising from the uterus. Their absence in the presence of general symptoms means that we should look to other organs for the source, such as the vagina or vulva or some general disturbance accompanying the puerperal condition. He holds that the genitourinary tract is at all times well protected in ordinary cases in healthy women and only the operator's hands

can be a source of infection. Intrauterine douches can not clear the uterus from infecting germs. The only way to do this is to cause firm contraction of the uterus and limit infection, together with the use of a remedy to aid rapid absorption, and which, by its antiseptic properties, will destroy the germs. For this purpose he finds firm packing with reliable iodoform gauze the best method.

61.—See abstract in THE JOURNAL, xl, p. 1530.

62. **Post-Operative Cystitis.**—This condition, especially when occurring after ureteral denudation, Kolischer thinks is probably due to nutritive changes causing a point of less resistance for the immigration of micro-organisms which probably come from the intestine. Trophoneurotic changes also appear probable at the end of a denuded ureter. It is important always to make sure of the condition of the bladder before operation, and to consider also the possibility of cystitis occurring some time after operation as not having anything to do with the latter but being due to other causes.

Clinical Review, Chicago.

September.

63 Report of Two Cases of Labor in Deformed Pelves. Joseph B. DeLee.
64 *Pathogenesis of Locomotor Ataxia. G. B. Hassin.
65 *Semilunar Cartilages; Their Anatomy and Surgery. H. A. Sifton.
66 Clinical Lectures on the Etiology, Pathology, Diagnosis and Treatment of Tumors. A. H. Levings.

64. **Pathogenesis of Locomotor Ataxia.**—Hassin's article on this subject is concluded in this issue. He finds that tabes dorsalis is the result of an affection of the posterior roots of the spinal cord; chiefly mechanical, due to compression on the part of the membranes of the spinal cord or of the brain. Its cause is everything that may produce meningitis, taking cold, sexual abuses and infectious diseases, chiefly syphilis. The treatment must be mechanical; surgical in those forms of tabes where it can be applied (tabes cervicalis, tabes dorsalis). Such treatment, if taken early, will stop further development. In studying the clinical forms of tabes, all the newest methods applicable in the study of meningitis must be applied: Kernig's symptom, cryoscopy, cytoscopy and hemolysis of the spinal fluid of tabetic patients. Hassin presents elaborate arguments in support of this view of the pathogenesis and urging the importance of the minutest microscopic examination of the spinal membranes and the brain and experimental research for better knowledge of the subject.

65. **The Semilunar Cartilages.**—Sifton has found comparatively little literature in regard to injuries of these bodies. Simple displacement of the cartilage in the knee would be often taken for sprain. The joint will usually be locked in a position somewhat short of complete extension. This symptom is not found in any other injury of the joint except in cases of a floating body which is practically the same as a loose cartilage. For treatment the cartilage should be reduced if possible; if it is torn loose it can not be reduced by any form of manipulation, but if it is only dislocated it can readily be replaced by fully flexing the knee, rotating it outward or inward and then quickly extending it. If the cartilage is prominent, pressure should be made on the prominent point, while manipulations are carried on. Any form of splint which can give the knee rest should be applied. After a week this splint should be removed daily for careful massage and passive movements. Eight to twelve weeks are required for the cartilage to become fixed after the first injury. Some cases, however, do not completely recover and are likely to get out of place again at the slightest provocation. Elastic knee bandages and braces are then worthless, and relief can be obtained only by operative measures, completely removing all detached or loose portions of the cartilage. The operation should be under the most careful asepsis. He describes his technic as follows, with the details of 2 cases operated on:

> The best form of incision for the removal of a semilunar cartilage is the U-shaped, with the convex border towards the patella. Turning the flap down to the required extent the joint is opened by a transverse incision above the upper surface of the cartilage. This incision should be made as far above the cartilage as possible, for the reason that there is a considerable artery immediately beneath the lower border which might be wounded if the incision was made close to the cartilage. I believe that the U-shaped incision of the skin and overlying tissues is much preferable to a straight incision, for the reason that it divides the resulting scar into three parts and is, consequently, more flexible than if all the tissues had been divided in the same line. If the incision is carried well forward it will not be necessary to interfere with the lateral ligaments, ample room being obtainable by running the cut well forward. By retracting the patella and manipulating the joint a good view of one-half of the knee is easily obtained. As above stated, I would not recommend, under any circumstance, an attempt to suture the cartilage, but would remove all the detached portion. This can best be done by a strong, narrow-bladed scissors. I think no fluid should be introduced into the joint unless considerable hemorrhage has been encountered and it becomes necessary to wash out blood clots which have accidentally obtained access to the cavity. The rule which should always be followed is to produce as little traumatism as possible and attain the object necessary. The joint should be closed by a continuous, fine catgut suture and the skin incision then closed. The limb should be put at rest by means of a plaster dressing for two weeks, at the end of which time, the wound being entirely united, gentle manipulation of the joint is commenced, the patient being also allowed to bear some weight on the leg.

Physician and Surgeon, Detroit and Ann Arbor.

July.

67 *The Iodin Reaction in Surgery. Conrad George.
68 *Pathologic Changes Following Lacerations of the Cervix. Ralph L. Morse.
69 *Displacement of the Pelvic Organs. James G. Lynds.

67. **The Iodin Reaction in Surgery.**—This reaction which has been known for over twenty years and with which the leucocytes of the blood contain granules showing a reddish-brown stain with iodin, has been studied by George. He finds as a general result of his investigation that the reaction alone and apart from a study of the history of the case is not of much value. It can be regarded as a symptom of a little more value than leucocytosis, but not as pathognomonic in any degree. The diagnosis of abscess or sepsis can only be made by a careful study of the reaction in connection with other symptoms, and no one symptom can be taken as an indication for operation.

68. **Cervical Lacerations.**—Morse reviews the pathologic changes of cervical lacerations, the variations in the columnar epithelium, stimulating it to proliferation, and the acid and infected vaginal secretions producing so-called erosions and probably favoring the occurrence of malignant disease.

69. **Displacement of the Pelvic Organs.**—Lynds holds that in a considerable proportion of cases, especially with a large, heavy, retroverted uterus with lacerated cervix and prolapsed and diseased appendages and the patient nearing the menopause, he would remove the organs. In younger patients he would amputate or repair the cervix and perform an anterior or posterior colporrhaphy as indicated, and strengthen the pelvic floor. Then, if necessary, he would perform a ventrofixation or shorten the round ligaments as seems best. In many cases, however, anterior fixation does not prevent a return of the prolapse. His experience has been that even in partial procidentia the greater amount of the suffering is only partially, if at all, removed by the internal shortening amputation and operation on vagina of the organs. He does not advocate hysterectomy in all cases of prolapse, or even in all cases of procidentia, but thinks there is a class of cases where nothing short of it will give relief. Each case must be studied individually. There are few conditions requiring greater judgment as to the measures to be taken.

Texas Medical News, Austin.

August.

70 The Public Control of Tuberculosis. William S. Carter.
71 Appendicitis from a Surgical Point of View. A. B. Small.
72 Acute Traumatic Tetanus. R. McDaniel.
73 Herpes Zoster. The Use of Faradic Current for the Pain and Permanent Relief of this Annoying Symptom of Derangement of the Special Nerves Affected. E. N. Shaw.

Chicago Medical Recorder.

September 15.

74 *Some Causes of Bladder Hemorrhages Not Commonly Recognized. Louis E. Schmidt.
75 The Physician as a Business Man. Darwin R. Stockley.
76 Brown-Sequard Paralysis. R. S. Loving.
77 Medical Gymnastics and Massage in the Treatment of Sprains. Carl Kellberg.
78 *Notes on the Treatment of Puerperal Infections. Thomas J. Watkins.
79 Chronic Bright's Disease and Diabetes Mellitus; Diagnosis; Cause and Similarity. B. F. Felch.
80 *Improved Methods and Details in the Care of Patients During Surgical Operations. Fenton B. Turck.

74. Bladder Injuries.—Among the causes of bladder hemorrhages not usually recognized by the physician, Schmidt enumerates ulceration due to breaking down of gonorrheal infiltration of the mucosa, atheromatosis of the blood vessels, cystitis with extravasation, varicose degeneration of the bladder veins, a peculiar condition of the mucosa of the trigonum making it appear fluffy, like a piece of fine fabric and bleeding at the slightest irritation, which has been seen as yet only in women, and direct medical interference such as bi-manual examination or obstetrical operations, and traumatic granulation of the bladder which follows injuries to an already inflamed bladder wall.

78.—This article appeared elsewhere. See The Journal of July 4, title 74.

80. Protection During Surgical Operations.—Turck describes two or three improvements in the technic of surgical operations. For instance, to avoid peritoneal contamination in abdominal operations he proposes a square sheet of rubber dam with two small openings 3 to 6 in. apart, reinforced by a rubber band forming a collar. This is laid over the wound and the part to be incised, the stomach, for example, in gastroenterostomy, is drawn through one of the openings, which stretches and hugs closely to the protruding viscus. The loop of intestine selected for the anastomosis is drawn through the other opening. The two parts drawn through the opening are completely isolated from the rest of the peritoneal cavity, as the rubber overlaps the edges of the wound. When the anastomosis is performed the shield is slit open with scissors, the viscera set free, and replaced in the abdominal cavity. Contamination of the peritoneum as the viscera are opened is absolutely prevented. The constricting band around the viscera also prevents hemorrhage and any considerable escape of their contents. The same principle can be used in different operations such as cholecystotomy. As the rubber-covered viscus is grasped and not the viscus directly, there is less danger of injury. Another valuable protective device is what he calls a rubber drainage coffer-dam. Around the drainage tube at the point of insertion—as for example in cholecystotomy where drainage of the gall-bladder is desired—the thin flexible rubber cylinder is stretched around the neck of the gall bladder, and fits snugly to the outer wall, but not enough to shut off circulation. A few stitches hold it in place. A drainage tube is then inserted within the rubber cylinder and stitched into the gall bladder in the usual way. Between the inner drainage tube and the coffer-dam a few strands of suture material are placed for drainage. Gauze can be packed around it in the usual way. Other devices which he uses for preventing shock are small, thin, hot-water bags inserted into the abdominal cavity and the use of heat stimulation of the soles of the feet to prevent shock. To provide heat at a constant temperature during surgical operations he has devised what he calls *hot-water-coil slippers*, a device which has been of service in the prevention of shock in his own experience. Even when shock is not imminent the use of heat to the soles has a good effect on the circulation and better elimination is established.

Dominion Medical Monthly, Toronto.

August.

81 *The Buried Animal Suture; Its Value in Aseptic Surgery. Henry O. Marcy.
82 *The Operative Treatment of Goiter. George A. Bingham.
83 Successful Operation on Four Cases of Goiter in a Septic Condition. Herbert A. Bruce.
84 His Mother's Legacy. Robert A. Hood.

81. Buried Sutures.—Marcy gives the history of the use of buried animal sutures (preferably tendon) and points out their utility. He thinks the time will come when they will hold the first place in the technic of modern aseptic wound treatment. He advocates the continuous rather than the interrupted sutures, as they do not leave pockets for the accumulation of fluids, and a parallel rather than a glover's stitch, the needle inserted within the tissue parallel to the long axis of the wound, each succeeding stitch made by introducing the needle exactly opposite the emergence of the preceding one. The continuous suture, moreover, requires but a single knot, and is less liable to produce undue constriction since compensation occurs, equalizing the force applied to the entire suture. This he considers of the utmost importance since injury and devitalization follow the earlier method. Fatty tissues should be avoided for buried sutures, but they seldom require independent suturing. He remarks that the interrupted suture is the legacy of the fathers, and was used for the purpose of removal of a stitch as desirable. If our tailor made our clothes in this manner we should wonder at his bungling methods.

82. Goiter.—While a case of benign goiter should only be operated on for relief of definite symptoms, in malignant disease excision of the gland is the only hope. To avoid compression of the important organs Bingham would operate even in advanced malignant disease. He has also operated in exophthalmic goiter and thinks that any case failing to respond to prolonged medical treatment with steady increase of growth should be given the benefit of operative interference. These cases are somewhat more dangerous as regards anesthetics, but he has used chloroform, though the ideal would be local anesthesia. In bad cases of dyspnea he stops the anesthetic as soon as the skin incision is done, and thinks by the intelligent co-operation between surgeon and anesthetist, the patient can be nursed along through the operation without suffering and with a minimum amount of damage, and, being so lightly anesthetized, by his unconscious phonation is able to give an assurance of the safety of the recurrent laryngeal nerve. He makes a shallow U-shaped incision across the tumor from one sterno-mastoid to another, passing through the skin and subcutaneous tissue, platysma and deep cervical fascia. Two flaps dissected up and down, and if necessary the anterior jugular is cut between ligatures. Then the pretracheal layer of the cervical fascia is very carefully incised in the median line. Just below this the capsule of the tumor appears. If it is opened up hemorrhage may be difficult to control. The surgeon should work outside but close to the capsule. The opening in the pretracheal fascia is enlarged as required, the finger introduced, and adhesions between the fascia and capsule broken down. It is then swept around the outer and upper margin of the tumor, forcing the pretracheal fascia and muscles over the edge of the mass, and the superior thyroid vessels are recognized and cut between clamps. This usually releases the outer part of the lobe, which may now be drawn forward and with the finger everything is stripped away from the posterior wall of the capsule. If care is taken to strip closely and from the posterior part of the capsule, the recurrent laryngeal will be pushed away from the inferior thyroid vessels or tied off close to the tumor and the lobe is completely freed, and we see the rings of the trachea to which the isthmus is adherent. No violence must be used in separating the isthmus. The tracheal wall will probably be atrophied by pressure and special care is required. He has often left a portion of the isthmus rather than risk its separation. The junction of the isthmus with the opposite lobe is now transfixed with silk and tied off and the mass cut away. The ligating of the pedicle, while unnecessary so far as hemorrhage is concerned, serves a purpose, he thinks, in preventing the escape of thyroid secretion into the wound. Every possible bleeding point should be tied and care taken to obliterate the huge "dead space," which he does by a series of quilting sutures. Temporary drainage is employed by the Cheyne method, cutting a buttonhole through the lower flap, just above the sternum and drawing a small tube through, the inner end of which lies in the lower part of the wound behind the sternomastoid. A provisional suture is placed in this little wound and tied when the tube is withdrawn after forty-eight hours. If the pretracheal or sternomastoid muscles have been cut, they should be sutured and the wound in the pretracheal fascia closed, running a suture of fine silk close against the wound and applying plenty of dressing. The head is supported between two sandbags. The nurse is instructed to prevent any violent movement of the head when the patient is recovering consciousness, and to compress the dressing gently during vomiting. Tachycardia and high temperature may be controlled by digitalin and ice bags. In case of adenoma or cystoma of the thyroid, the procedure is modified. The capsule is cut through, the tumor enucleated and hemorrhage is rapidly controlled. There may be partial or complete aphonia after the operation, but it is usually only temporary.

Medical Summary, Philadelphia.

September.

85 A Case of Skin Grafting by Skin Scrapings. Carl Seiler
86 The Treatment of Acute Dysentery. Robert C. Kenner
87 Exterminate the Fly; He Is an Insidious and Formidable Foe. William H. Vail.
88 Opium and Its Effects on the System. J. L. Wolfe
89 The Therapeutic Value of Sulphur; Some Phases of Indigestion. A. Atkinson.
90 Passiflora in Nervous Reflexes. O. Henley Snider
91 Body Protection vs. Financial Protection. N. B. Shade
92 Dr. Littlefield's Discovery. Luigi G. Doane
93 Typhoid Fever. J. A. De Armand
94 Concordia Discors—Discordant Harmony. F. S. Tripp
95 Flesh Lights. Zachary Taylor.

Memphis Medical Monthly.

September.

96 Uterine Conditions Demanding the Services of the General Practitioner. T. J. Happel
97 Notes from a General Practitioner's Case Book. John A. Blackmon.
98 Some Notes from the Eye and Ear Service of the City Hospital, May and June, 1903. E. C. Ellett.
99 Something About Finsen Light Treatment. Eaton K. McNeill.
100 The Technic of Urinalysis. R. F. Turner.
101 Hepatic Abscess Following Appendicitis. Frank D. Smythe.
102 Leukemia; Leucocythemia. William B. Burns

Merck's Archives, New York.

September.

103 Phytolacca Decandra. W. H. Blake.
104 The Use of Ichthyol in Diseases of the Upper Respiratory Tract. Lewis S. Somers.
105 An Index of Diseases, Alphabetically Arranged, with Their Modern Treatment. (Continued.) G. Bjorkman

Colorado Medical Journal, Denver.

June.

106 Anesthesia, with Special Reference to the Use of the Schleich Principle. Robert M. Stone.
107 Case of Exophthalmic Goiter Accompanied by Dysmenorrhea. Minnie C. T. Love.
108 Report of a Case of Gastric Ulcer. Saling Simon.

Journal of the Kansas Medical Society, Topeka.

September.

109 Conservatism in Pelvic Surgery. F. H. Martin.
110 Traumatic Epilepsy; Report of a Case. A. Haggart.
111 Ethics and State Legislation Controlling the Qualifications to Practice Medicine. George A. Boyd.

Northwestern Lancet, Minneapolis.

September 15.

112 Some Problems in Gynecologic Surgery. A. E. Benjamin.
113 The Surgical Prospect of Gastric Cancer. J. H. Dunn.
114 Case of Sarcoma of the Femur Recurring After Amputation and Cured by Injections of Coley's Fluid. H. B. Sweetser.
116 Fatal Poisoning by Oil of Chenopodium. Edwin T. Ramsey.
117 Aristochin; a New and Better Quinin Preparation. E. Klaveness.

Virginia Medical Semi-Monthly, Richmond.

September 11.

118 Remarks About Eye Injuries, with Cases in Point. Joseph A. White
119 A Case of Ptomaine Poisoning Simulating Smallpox. Llewellyn Eliot.
120 Properties of the Syrup of Iodid of Iron. M. D. Hoge, Jr.

Denver Medical Times.

September.

121 Ophthalmic Neonatorum, with a Brief Report of 50 Cases. L. W. Snow.
122 Subscription Problems. C. F. Taylor
123 A Clinical Outline of Dropsies. Edward C. Hill.

Medical Age, Detroit.

September 10.

124 Acute Suppurative Ethmoiditis. John A. Thompson.
125 Report of a Case of Pancreatic Cyst. William F. Cheney.
126 Origin and Development of Human Sensation and Thought from an Embryologic Standpoint. J. M. Fort.

Oklahoma Medical News-Journal, Oklahoma City.

September.

127 Placenta Previa. P. J. Bartle.
128 The Importance of Urinalysis in the Diagnosis of Disease. W. E. Dicken.

Journal of Medicine and Science, Portland, Me.

September.

129 General Practitioner or Specialist in Medicine? Is It to Be One or Both? Franklin Staples.
130 Some Interesting Cases Treated in the Maine Eye and Ear Infirmary, Portland, May, 1903. F. C. Lord.

American Medical Compend, Toledo, Ohio.

September.

131 Surgery of the Biliary Tract; Report of Cases. Hal C. Wyman.
132 Are There Specifics in Medicine? J. B. Casebeer.
133 A Few Thoughts on Tuberculosis. J. P. Dewitt.
134 A Few Remarks Concerning Uremia. Auguste Rhu.
135 The Successful Treatment of a Severe Case of Diphtheria. E. Park Edwards.

Kansas City Medical Index-Lancet.

September.

136 Paralysis Agitans, Complicated with Delusional Mania, with Report of Case. John Punton.
137 Ulceration of the Bowel. J. R. Phelan.
138 The Emergency Treatment in Cases of Acute Poisoning. Richard L. Sutton.
139 The Clinical Use of Pepto-mangan. John Punton.

Medical Fortnightly, St. Louis.

September 10.

140 Human Asymmetry. Maskel Lee.
141 Smallpox. James E. Free.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

[Note.—The *British Medical Journal* and the *Lancet* of September 5, being their "educational numbers," contained no original articles.]

British Medical Journal, London.

September 12.

1 *Inoculability of Human Tuberculosis on Bovines. D. J. Hamilton.
2 *Two Cases of Obliterative Arteritis in Young Men Leading to Gangrene in Extremities. E. Michels and F. Parkes Weber.
3 *A Discussion on Miners' Phthisis. Thomas Oliver, J. G. Adami and others.
4 *Discussion on the Pathology of Splenic Anemia. H. D. Rolleston and others.
5 Changes in the Spinal Cord in a Case of Diphtheria and of Alcoholic Paralysis. J. Michell Clarke.
6 The Purin Bodies of Human Feces in Health and Disease. I. Walker Hall.
7 Classification Cards for Use in Bacteriology. Kenneth Goadby.
8 A New Method for the Determination of Uric Acid in Urine. A. F. Dimmock and F. W. Branson.
9 Leucocytosis and Lymphocytosis in Malignant Disease, Lymphadenoma, Leukemia, etc., with Tables of 42 Blood Examinations. F. G. Bushnell.
10 Case of Syphilitic Nephritis in an Infant Aged 5 Months. George Carpenter.
11 *Adenoid Vegetations in Infancy. R. C. Dun.

1. **Human and Bovine Tuberculosis.**—Hamilton replies to the critics of his experiments and claims that the tests were adequate and conclusive. He admits that in 4 of the 19 cases of calves inoculated with human tuberculosis a negative or doubtful result was obtained. The criticism made that he did not use the tuberculin test in all his experiments he thinks is useless. If the tuberculin test had been made the charge might then have been that immunity was produced by it. In regard to two cases inoculated with human tuberculosis from one calf to another, with the result of increased virulence, he maintains they were not due to mere accidental over-susceptibility of the animals employed. The opposite side of the question—whether bovine tuberculosis is transmissible to man, of course, can never be proven experimentally.

2. **Obliterative Arteritis.**—In the two cases described by Michels and Weber there was no obvious cause of the endarteritis. The authors seem to think there is a variety of obliterative endarteritis commencing in the arterioles of the extremity, especially in the muscles and subcutaneous tissue, that may possibly be explained by the presence of a nervous element, though the peripheral nerves were found normal. The presence of a nervous etiologic element would form the connecting link with some cases of Raynaud's disease and erythromelalgia.

3. **Miners' Phthisis.**—The subject of miners' phthisis is discussed by Oliver, who arrives at the following conclusions, which, he thinks, cover the points for discussion:

1. That miners' phthisis is not the result of the inhalations of gases given off by the strata, nor evolved by the explosives used in mines. 2. That it is a disease in which there is a marked

excess of fibrous tissue in the lungs, embedded in which can be seen numerous particles of coal dust and siliceous material; in which also cavities may be seen and tubercle occasionally detected. 3. That it is a disease of occupation, due to the irritating action of dust, which renders the individual liable to repeated catarrh; that it is non-tuberculous, not only in the early stages, but may even remain non-tuberculous throughout; that when tubercle is present it is an accidental infection, which, while hastening the end, does not exercise any very marked influence on the pre-existing structural alterations caused by dust, unless it be a tendency towards disintegration. 4. That it is a local disease, purely personal to the individual, and never assuming hereditary characters. 5. That, accepting this view of the pathology of the disease, miners' phthisis, as experience in this country has shown, may be largely prevented by improved ventilation and by the adoption of means for the removal of dust or for the allaying of dust by water.

In the discussion following Adami agreed with Oliver that the disorder was non-tuberculous, as did also Hamilton, who considers it rather an aseptic sloughing due to the altered condition of the lung; that is, in coal miners. In stone masons the lung complication with tubercle at the time of death or sometimes before is frequently met.

4. Splenic Anemia.—By this disease Rolleston understands a condition characterized by splenic enlargement and not correlated by any known cause, with absence of enlargement of the lymph glands, and with anemia of a type midway between secondary anemia and chlorosis. The disease is also characterized by leukopenia or at least no increase of the white blood corpuscles. It has an extremely long course, lasting years with a tendency to periodic hemorrhages, especially of the gastrointestinal tract. He reviews the conditions, the morbid anatomy, especially of the spleen, bone marrow and lymph glands and sums up the important points as follows:

> 1. Accepting chronic splenic anemia as a clinical entity, is there sufficient evidence to accept it as an established pathologic entity? 2. What significance can be attached to the structural changes in the blood, spleen, bone marrow, etc.? 3. What is the exact relation between splenic anemia and Banti's disease? 4. What is the nature of the disease? Is it an intoxication or an infection? Until the last question is fully answered, any reply to the first must either be suspended or be in the negative.

The subject was discussed by several authorities, among them Senator, who concludes that the reason for the swelling of the spleen is to be found in an abnormal blood condition due to various causes; in some cases, such as those occurring with malaria, rickets, etc., this may be due to a specific blood alteration due to the original infection. In other cases of unknown etiology it must be assumed that injurious substances reach the blood from the intestinal tube through the lymphatics. This is justified by the fact that the abdominal lymph glands are always more or less involved, even where no other swollen glands are found. The spleen is the primary point of attack, and this is supported by the fact that in a number of cases the disease was cured by splenectomy.

11. Adenoids.—Dun has observed cases in the Liverpool Infirmary for Children and finds from his studies that in the great majority of cases the symptoms are slight and do not materially affect the health and development of the child; that medical treatment is sufficient and operative interference uncalled for. On the other hand, there are some cases, comparatively few in number, with definite and severe symptoms, producing marked ill health, usually symptoms of nasal obstruction and catarrh with occasional reflex nervous phenomenon and septic processes. These cases are most satisfactorily treated by removal of the growths.

The Lancet, London.

September 12.

12 *The Influence of Brain Power on History. Norman Lockyer.
13 *Some Points in Abdominal Surgical Diseases. E. Stanmore Bishop.
14 *On the Virulence of the Bacillus of Bovine and Human Tuberculosis for Monkeys. Allan MacFadyen.
15 Bromid of Ethyl as a General Anesthetic and as a Preliminary to Ether. William R. Huggard.
16 On the Detection of Lead in Urine and Postmortem Specimens. J. W. Mellor and Frank Shufflebotham.
17 A Case of Umbilical Calculus. J. R. Harper and C. G. Seligmann.
18 A Case of Splenic Anemia. George Peacock, Thomas E. Gordon and J. Alfred Scott.
19 A Case of Rupture of the Esophagus from an Accident. T. R. C. Whipham.
20 *The Treatment of Cancer and Other Forms of Malignant Disease by Electric Osmose. Clarence A. J. Wright.
21 *The Treatment of Plague by Large Doses of Carbolic Acid Given Internally. J. Mitford Atkinson.
22 A Case of Presumed Ptomaine Poisoning. T. B. Broadway.
23 Postgraduate Work Abroad. 1. Paris. A. A. Warden.

12. Influence of Brain Power on History.—The title of Lockyer's address is a paraphrase of the well-known work of Capt. Mahan on "The Influence of Sea-power on History." Lockyer compares the educational facilities and the universities of Great Britain to those of Germany and the United States, greatly to the disadvantage of the former, and claims that as the work of Capt. Mahan has aroused the British nation to its needs for naval defense so it should be stirred up to national effort to meet the competition of outsiders in the matter of education. He says to sum up:

> I have endeavored to point out to you how the nation at present suffers from the absence of a powerful, continuous, reasoned expression of scientific opinion, urging that we shall be armed as other nations are, with efficient universities and facilities for research to uphold the flag of Britain in the domain of learning and discovery. I have also endeavored to show that, in addition to our many existing councils, another is required to secure that the benefits which a proper co-ordination of scientific effort in the nation's interest can bring shall no longer be neglected. Let me also remind you that in 1859, when the late prince consort occupied this chair, he referred to "impediments" to scientific progress, and said: "They are often such as can only be successfully dealt with by the powerful arm of the state or the long purse of the nation."

13. Abdominal Surgical Diseases.—Bishop calls attention to certain points in regard to abdominal surgery, especially the question of perforation in appendicitis, in gastric and duodenal ulcer, etc. He discusses the symptoms and illustrates by cases the points he makes. He says the abdominal cavity with the structures contained in it may be pathologically looked on the same as a large joint, and the first and automatically present result of inflammatory changes in the peritoneum will be and must be rigidity of the muscles, which ordinarily produce movement between the intestines and abdominal wall. It is more important to emphasize this because it is not persistent, but may disappear early in the case. This particular factor will apply to any case of perforation, duodenal, gastric, enteric or appendiceal and slighter and more localized degrees of it may be seen in localized peritonitis. The fact of having one certain sign to rely on as evidence renders the absence of that sign a tremendous comfort to all concerned. Another point is that of intussusception. Here he calls attention to the misleading remarks on diagnosis of some of the text-books, viz., the classical symptom of sausage-shaped mass in the abdomen, the passage of blood and mucus in the stools, the sudden pain and vomiting and an os-uteri-like body to be felt per rectum. He remarks that if we are to look for any thickened segment of the intestine in these cases that must be at the time it is contracted on itself which is during a paroxysm of pain. It is just at this time that the examination is apt to be neglected. The child is crying violently and is turned over to its mother to be soothed and petted into peace. Then when he is quieted again, when both he and the muscular contractions of his bowel are exhausted, the examination is resumed, and failing to find any trace of it, its existence is ignored. Another symptom often missed, but which must be present in every case, is a bloody exudation of mucus. Intussusception means more than simply the compression of one segment into another; it means strangulation of the mesenteric vessels to some extent. The fluid is prevented from escaping and the capillaries are enlarged. Blood is effused into the lumen of the gut. As for feeling for the end of the intussusception per rectum, it is a most dangerous waste of time. Consider how far it must travel in, say the ileocecal variety, which is the most common, before it can possibly come within the reach of the finger. He also points out the hopelessness of attempting to reduce intussusception by the injection of air or water and is dubious as to the reported cases of success in this way. Maunsell's operation is the only resource. He also notices ectopic gestation and its diagnostic points. The points on which he lays stress are the occurrence of abnormal blood discharges in women with some of the signs of early pregnancy who have had a missed or even slightly delayed period and who complain of pain in either or both thighs extending toward the knee in the course of the obturator or anterior crural nerve. Bi-manual examination in such cases should be done at once. If a small mass is found beside the uterus, abdominal section should be done at once without delay. Another condition in which somewhat similar symptoms may occur is that of tumor in which the pedicle is twisted, and the tumor becomes engorged. This may occur from a fall or from no apparent cause at all, but there is usually some previous history of an abnormal mass to suggest the condition to be found.

14. **Bovine and Human Tuberculosis.**—MacFadyen has experimented on monkeys with bovine and human tubercle bacilli and found that the animals proved susceptible to the bacillus of bovine tuberculosis either directly or after one passage through the organism of the guinea-pig.

A certain number of the animals died in two or in ten days after feeding with bovine and human tuberculous material. Normal human sputum did not produce this effect and the result suggested some form of intoxication. The monkey fed thrice, twice, or once with the bovine material succumbed to a general tuberculosis in from about one to two months, and, fed with the human material, the same results and fatal effect were produced in about the same period of time. The young monkey proved to be equally susceptible to the bovine and human strains of the tubercle bacilli. The striking difference in the effects produced occurred in the digestive tract. Intestinal lesions were found in the case of every monkey that had been fed with human tuberculous material, while none of the monkeys fed with the bovine material presented any evidence of tuberculous ulcers in the intestine. Within the limits of these experiments it would appear that virulent bovine tubercle bacilli may pass through the intestinal wall in large numbers without any detectable lesion of the gut being produced. It would also appear that a food tuberculosis can be as readily brought about by the bovine as by the human strain of the tubercle bacilli in the young monkey.

20. **The Electric Treatment of Cancer.**—Wright describes the mechanism of cataphoresis and gives the results of his experiments with it in cancer. He finds that the mineral acids thus used would cause a resolution of the skin and tissues, while the metallic salts give rise to necrosis. Alcohol gives rise to the immediate coagulation of albuminous constituents and produces subsequent fibrosis. With liquid paraffin substances can be transferred into the tissues. Iodin, salicylate of soda, lithium, salts and pilocarpin produce their own specific reactions. In his experiments on cancer he employs either a dilute glycerophosphate alcoholature or liquid paraffin in emulsion as a vehicle for the salts employed. The chief of these are cinnamate of strontium, glycerophosphate of lime and strontium, citric acid, iodin, and suprarenal extract. He relies mostly on the first named, but the glycerophosphates have proven useful in assisting in casting off a slough and promoting healing after an application of acid nitrate of bismuth. Citric acid is used for subduing neuralgic pain either alone or in conjunction with phenazonum. Iodin is chiefly used for reducing the indurated glands and promoting absorption, although a strong solution was occasionally used for escharotic effects on the tissues. The suprarenal extract he employed as a preliminary to treatment in most sittings to limit absorption and concentrate the action of the drug. Of the 23 cases of which he has notes he has had good results in 5, which he reports.

21. **Carbolic Acid in Plague.**—Atkinson reports six cases of plague treated by large doses of carbolic acid; 10 gr. being given every two hours for various periods, internally. The blood examination was made for the bacilli during treatment and they were found to have disappeared.

Journal of Tropical Medicine, London.

September 1.

24 *Observations on Akatama, a West Central African Disease. Frederick C. Wellman.
25 Mosquitoes in Relation to Malaria in the Province of Huelva, Spain. Ian MacDonald.

24. **Akatama.**—This is the name given to a sort of peripheral endemic neuritis of obscure origin, characterized by numbness and intense prickling and burning sensations in the presence of cold or damp which are temporarily relieved by the application of dry heat. It is found all over the territory occupied by certain tribes in West Africa in whom 3 to 5 per cent. are more or less disabled by it. The theories of the disease are various. The more probable would be that it might be due to sudden changes of temperature, though the prevalence of the disease is not always coexistent with the exposure. Its being an intoxication analogous to beri-beri is possible, but there are no motor symptoms and it is not especially localized or affected by change of residence. The theory of nerve starvation is not borne out since these tribes are well fed. The diagnosis is easy; the patient himself generally understands what is the matter with him. The prognosis is good as to life and general health, but the treatment is unsatisfactory. Some cases seem to undergo a spontaneous cure.

Presse Medicale, Paris.

26 (No. 69.) La thérapeutique par les agents physiques au XVIII siècle. A. Brocchi.
27 *Torsion du pedicule des cystes du ligament large. P. Sikora.
28 (No. 70.) La survie au point de vue médico-légal. P. A. Mesnard.
29 Schémas dulbo-protubérantiels. P. Bonnier.
30 Fracture de la base du crane (of the skull). A. Mignon.

27. **Cysts in Broad Ligament.**—Sikora reviews 3 cases and adds another personally observed in which a large cystic tumor, supposed to be an ovarian cyst, proved to be a parovarian cyst with a twisted pedicle. The pedicle is always wide, 4 to 6 cm., and the torsion is never abrupt, but slow and gradual. The hemorrhage was always too small to induce appreciable symptoms.

Semaine Medicale, Paris.

31 (XXIII, No. 35.) *L'hérédité pathologique et la théorie du plasma germinatif. S. Jankelovitch.

31. **Pathologic Heredity.**—Jankelovitch discusses the later scientific researches which show that in certain families there is an undue tendency to alkalinity of the plasm or to toxicity on the part of the organic fluids or to hypothermia, thus checking the vital action of the phagocytes, or some other similar abnormal condition transmitted from generation to generation which the clinician may in time learn to determine with precision. He accepts this as the scientific foundation for the old theory of the "predisposition" and the mystic conception of the "temperament." Weismann's theory of the germ plasm does not interfere with this conception of pathologic heredity. Admitting that all the ancestral properties are localized in the innumerable biophores or molecules of the germ plasm, we may easily assume a number of combinations between them sufficient to explain all the variations which may occur in the descendants of a single family. We can conceive that the spermatozoa and the ova do not all possess absolutely identical properties, and consequently the product of each fecundation will have only the properties derived from a single spermatozoön and a single ovum. The resulting combination of properties varies for the product of each fecundation.

Archiv f. Gynaekologie, Berlin.

Last indexed XL, page 1685.

32 (LXIX, No. 1.) *Fractured Pelvis. L. Blumreich.—Zur Lehre vom Frakturenbecken.
33 *Ueber die Behandlung der Placenta previa mit der Methode Bossi. W. de Paoli (*Genoa*).
34 *Changes in Ovaries Accompanying Uterine Tumors and Vesicular Mole. E. Runge (Dresden).—Ueber die Veränderungen der Ovarien bei syncytialen Tumoren und Blasenmole, zugleich ein Beitrag zur Histogenese der Lutein-Cyste.
35 *Study of Two Cases of Death in Eclampsia. L. Seitz.—2 sub partu verstorbene Fälle von Eklampsie mit vorzeitiger Lösung der normal sitzenden Plazenta; mikroskopische Befunde an Plazenta und Eihäuten.
36 *Anatomische und klinische Beiträge zur Vaporisation des Uterus. H. Fuchs (Kiel).
37 *Differentiation of Fetal Heart Sounds and Umbilical Sounds. O. Hoehne (Ibid.).—Zur Differential-Diagnose von Nabelschnurgeräusch und fötalem Herzgeräusch und zur Indikationsstellung bei intra partum erkannten fötalem Herz-Fehler.
38 *Experiences in Treatment of Suppurative Affections of Adnexa and of Pelvic Connective Tissue. P. Jung (Greifswald).—Erfahrungen bei der Behandlung eitriger Aff. der Adnexe und des Beckenbindegewebes.

32. **Fracture of Pelvis.**—Blumreich's patient fell from a second story when she was 18, alighting on the left side. This side of the pelvis became obliquely contracted, and during childbirth 5 years later did not participate in the birth act. The fetus was perforated, but in a second pregnancy she was delivered of a living child, 42 cm. in length, after application of the metreurynter. Delivery occurred as in case of a generally contracted pelvis.

33. **Treatment of Placenta Previa by Bossi's Method.**—De Paoli reports 19 cases thus treated. The portio was dilated in five to twenty-five minutes without laceration sufficient to

74. **Thyroid Treatment of Cretinismus.**—M. Levy found that thyroid treatment proved very beneficial in 7 cases of endemic cretinism, the same as in the sporadic form. In this his experience differs from that of Schulz at Graz, who was unable to detect any improvement in 100 cases of the endemic variety treated with thyroid extract. Possibly the endemic cretinism in Alsace, where Levy's tests were made, is not so deep-rooted as at Graz.

76. **Self-Protection in Roentgen Work.**—Beck suggests that the tubes should be tested on the bones of a hand or arm fastened on pasteboard, instead of testing them on the operator's own hand or arm as is too often done.

77. **Osmic Acid in Clinical Microscopy.**—Posner states that he has found the fumes of osmic acid very useful for fixation of fresh specimens of blood or other organic fluids. It "suffocates" the cell and preserves it in its natural outline better than any other substance. He keeps a few crystals of osmic acid in a jar with a close cover. The object glass to be examined is laid over the top of the jar with the cover above it, and the fixation is complete in 40 seconds.

78. **Narcosis in Ileus.**—Kausch prefers general narcosis for operating in ileus except when the operation is so trifling that local anesthesia will prove sufficient. In order to obviate the danger of aspiration of vomited matters during the narcosis he plugs the opening of the stomach into the esophagus. This is done by means of a rubber bag on the end of a fine tube tied to the sound. The bag is introduced into the stomach with the sound, which projects a little below the bag. The latter is then inflated through the narrow tube, thus completely closing the entrance into the esophagus. The contents of the stomach and intestines can find their way out through the sound if necessary, as he operates with the pelvis raised.

79. **Henoch's Purpura.**—Rommel describes a typical case observed in a boy 3 years old. Bacteriologic examinations were negative and nothing abnormal could be discovered in the heart. No treatment displayed any efficacy except possibly the opiates. The affection showed a pronounced tendency to recurrence.

81. **Epidural Injections in Treatment of Incontinence, Etc.**—The Journal described Cathelin's method of epidural injections, vol. xxxvii, pages 150 and 793, and vol. xxviii, page 1282, and has recently chronicled a number of successes with it in the treatment of urinary incontinence, etc., page 527, ¶117, and page 757, ¶124. The needle is inserted at a point just above a line drawn across the bases of the bony protuberances that form the triangle visible or palpable at the lower segment of the sacrum, x in Fig. 1. The needle is inserted as shown at A in Fig. 2 until it nearly touches the bone, then the handle is depressed until the needle parallels the bone, when it can be freely inserted quite a distance without coming in contact with bone or other tissues. The best position is the erect, but it may be necessary to have the subject recline on the left side and flex the limbs to bring the bony triangle into prominence. It is never exactly in the anal furrow but a little above it as the subject reclines on the left side. For further particulars see references above.

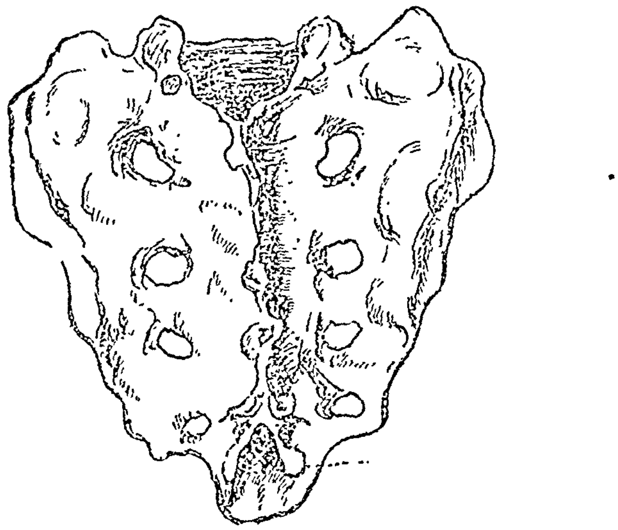

Figure 1.

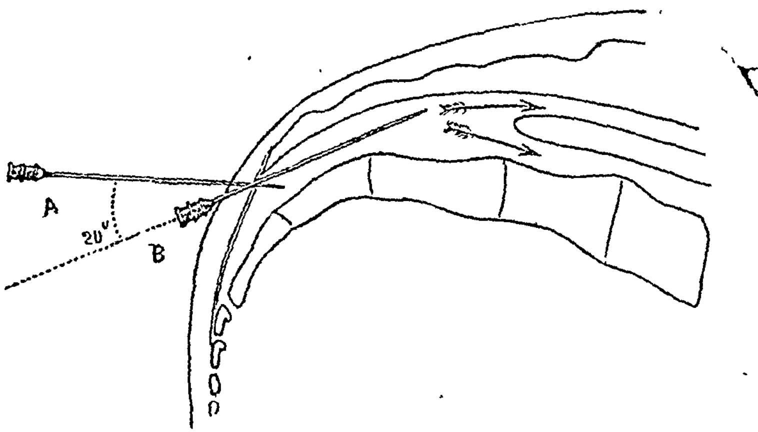

Figure 2.

82. **The Omentum as a Protecting Organ.**—The researches on dogs reported establish that the omentum has more functions than hitherto appreciated. If, for example, the circulation of the spleen is entirely cut off, the omentum gradually envelopes and forms a capsule around the spleen inside which it is in time completely absorbed. If the omentum is removed after the circulation in the spleen is cut off, the organ does not become encapsulated and the animal speedily dies. When toxins are generated by gangrenous degeneration of the spleen or other organ the omentum seems to possess the power of neutralizing these toxins. Foreign bodies introduced into the abdominal cavity were likewise encapsulated by the omentum.

83. **Studies of Action of Collargol.**—Bamberger describes experimental researches and tests on his own person which show that the silver salts do not remain dissolved in the serum, and that they have no particular bactericidal action. Their unquestionable beneficial action is due, he thinks, to the mobilization of the leucocytes which they induce.

Centralblatt f. Bakteriologie, Etc., Jena.

Last indexed page 754.

86 (No. 10.) Ueber die Gruppe des Bacillus proteus vulgaris. B. Weber.
87 Immunity to Anthrax. O. Ball and A. Pettersson (Prague).—Ueber nat. und künstliche Milzbrandimmunität.
88 Ueber die verschiedenen Agglutininen des Typhus-Serums. A. Joos (Brussels).
89 Mode of Action of Anti-trypsin of Blood Serum. M. Ascoli and C. Bezzola.—Ueber die Wirkungsweise des Antitrypsins des Blutserums.
90 Bactericidal Action of Disinfectants in Alkaline Solutions. Engels (Marburg).—Ueber die bakt. Wirkung in Alkali gelösten Desinficienten auf Bakterien-Kulturen.
91 Das Aetz-Sublimat und das Formaldehyd in der Desinfektions-Praxis. F. Abba and A. Rondelli (Turin).

Deutsche Med. Wochenschrift, Berlin and Leipsic.

92 (XXIX, No. 36.) *The Housing Question and the State. F. Hueppe.—Staatliche Wohnungsfürsorge.
93 Elaboration of Specific Antibodies After Cutaneous Infection. F. Kasten (Institute of Infectious Diseases, Berlin).—Ueber die Bildung von spec. Antikörpern nach kutaner Infektion.
94 *Ueber chronische Gonorrhoe und Gonococcen-Nachweis. F. Meyer.
95 (No. 37.) *Ueber Immunisirung gegen Tuberkulose. F. Neufeld (Institute for Infectious Diseases, Berlin).
96 *Traumatic Late Apoplexy. H. Kron (Berlin).—Zur Frage der traum. Spätapoplexie.
97 *Ueber wandernde Phlebitis. E. Neisser (Stettin).
98 *Dependence of Cyclic Albuminuria on the Circulation. P. Moritz (Greifswald).
99 Paraffin Prothesis. A. E. Stein (Wiesbaden).—Ueber die Verwendung von hartem oder weichem Paraffin zu subkutanen Injektionen.
100 Report of Committee on Foot-and-mouth Disease, 1901-2. Loeffler (Greifswald).

92. **The Housing Problem.**—Hueppe discusses the recent regulations on this subject in Prussia, and recommends among other things that a building line should be established in residence districts a certain distance back from the street, back of which nothing in the way of buildings should be allowed,

with fences not over six feet in height between the different yards. This would give an open square in the center of the block, even if the street front were built up solid, and he remarks that the air in such a square is surprisingly good, sheltered from the dust of the surrounding streets. He states that up to the end of the seventeenth century the arrangement and building of German cities were considered matters of public concern and accommodations were provided ample for all, with rents low. In the unprecedented flocking of the people from the country to the city in the last century the provisions for housing the multitudes proved inadequate. He insists that small houses are cheaper to build and maintain and more remunerative for a district in the end than many-storied tenement houses, especially if, as the new Prussian law contemplates, the special assessments, water tax, etc., are reduced 25 per cent., when it is shown that the houses are occupied by the poorer classes.

94. **Chronic Gonorrhea and Its Treatment.**—Meyer has followed 90 cases of chronic catarrhal urethritis for months or years, controlling the microscopic findings with cultures and clinical observation. He advocates making cultures from the secretions as a routine procedure of the greatest importance for treatment and indispensable to a proper understanding of the case. By repeated inoculation of the secretions on suitable culture media he succeeded in demonstrating gonococci in 50 per cent. of the total 90 cases. In 58 cases the microscope and the cultures gave identical results, while in 29 cultures developed when the microscope findings were negative. The microscope sometimes revealed the cocci after a preceding irritation of the mucosa, but the cultures revealed them without the necessity for this irritation. The culture medium found best adapted for the purpose was Kiefer's mixture of 3.5 per cent. agar, 5 per cent. peptone, 2 per cent. glycerin, and .5 per cent. salt, adding one-third by volume of sterile ascitic fluid.

95. **Successful Immunization of Cattle Against Tuberculosis.**—Neufeld presents the official report of the researches which Robert Koch has been conducting during the last two years, and which have established the possibility and feasibility of rendering cattle absolutely immune to tuberculosis. They also confirm his assertions in regard to the non-identity of human and bovine tuberculosis. His conviction that the agglutinating power and the degree of immunity are intimately connected has also been confirmed as the method of treatment which induced the highest agglutinating power ensured the highest degree of immunization. The non-identity of human and bovine tuberculosis was the key that solved the problem of immunization, as he found it possible by preliminary treatment with one kind of virus to immunize the animal against the other kind. Neufeld mentions that this possibility has been suggested by Macfadyan, von Behring, Pearson, Leonard and Gilliland, but Koch's researches had been long under way before their publications and his technic is different. He delayed publishing his report for the reason among others that he was hoping to be able to immunize other animals, such as the guinea-pig, which is very susceptible to both bovine and human tuberculosis. This wish has not been realized to date. The general plan of the immunization was to commence with injections of dead tubercle bacilli and then continue with increasing doses of living cultures, first of human tuberculosis and then of bovine tuberculosis—*Perlsucht*, reaching as large doses of each as possible. This general plan was varied in a number of ways, as, for instance, some of the animals were treated with the living bacilli from the first, and it was possible to confer immunity by this means likewise. In all the animals, however, asses, goats and cattle, it was soon found that a limit was speedily reached beyond which it was impossible to go. This limit is not established by the action of the infection, but by the action of the toxins of the cultures. In this respect human and bovine tuberculosis proved to be about on a level, or rather the toxic action of *Perlsucht* is unmistakably stronger than that of the human cultures. It was impossible to determine the minimal fatal dose, as the susceptibility to the toxin varied in different animals, and even in the same animal at different times. In asses it ranged from 50 to 100 mg. of human tubercle bacilli, while goats tolerated only 30 mg. of human and 20 mg. of bovine tubercle bacilli, and even 10 mg. sometimes proved fatal. This toxic action of the cultures established a limit to the process of immunization beyond which it was impossible to bring the animals, even after being long accustomed to the injections. This is similar to what is observed in typhoid and cholera, but the conditions are much more complicated in tuberculosis. In the former the toxic phenomena can be induced with killed bacteria if large enough doses are given, but this is not the case with tuberculosis. Even the intravenous injection of up to 300 mg. of the killed cultures caused slight reaction in goats. This is the more remarkable, as killed tubercle bacilli have the same power as living cultures to induce local toxic action; that is, the formation of nodules. Another remarkable feature of the toxic action in tuberculosis is the fact that it occurred exclusively in those animals that had previously been treated with tuberculosis cultures. The acute intoxication never developed in animals that had not had the preliminary treatment, even after much larger doses, as much as 100 mg. in goats. On the other hand, a peculiar chronic intoxication developed after very large doses. The acute intoxication proved fatal in less than twenty-four hours, and the findings correspond to those observed in tuberculin intoxication of tuberculous animals. He protests against the assumption from these facts that in both cases the toxin is the same, for otherwise it would have proved possible to protect the animals against the intoxication described by interposing treatment with progressive doses of tuberculin. This, however, was never accomplished, and the hope that tuberculin administered after a large dose of living cultures might avert the impending intoxication was never realized. This acute intoxication occurred approximately the same in asses, goats and cattle and proved an obstacle to the animals becoming accustomed to the injections. Another circumstance which rendered the immunization difficult was observed in the goats alone, namely, the injurious effect of too large or too frequently repeated doses of human tubercle bacilli. When too large doses were injected (30 to 60 mg. in fractional doses) little if any immunity was acquired, while with smaller doses the animals were rapidly rendered immune. The injections were always intravenous and the cultures were two to four weeks old, grown on glycerin bouillon or the Beck-Proskauer culture medium, dried with blotting paper, weighed and ground in a mortar with physiologic salt solution. The fluid was thoroughly shaken up and about 5 to 10 c.c. injected at a time. If the bacilli enter the circulation in lumps they are liable to induce the formation of a cavity in the lungs, even in an immunized animal. When the immunization had resulted positively and sufficient time had elapsed, small, smooth-walled, perfectly healed cavities were found in the lungs, entirely free from tubercle bacilli. If the animal dies or is killed a few weeks after the last immunizing injection, then, as is to be anticipated, more or less numerous indurated grey nodules undergoing retrogression will be found in the lungs. The desiccated bacilli were ground and injected in suspension in saline or centrifugalized or in glycerin after sedimentation. The cultures of *Perlsucht* bacilli were always extremely virulent. Goat No. 26, for example, was injected with .025 gm. ground (killed) tubercle bacilli, with eight days later an injection of .0025 gm. human tubercle bacilli, and eleven days after this an injection of .01 gm. *Perlsucht* bacilli. The animal died with symptoms of acute intoxication immediately after injection of .02 gm. *Perlsucht* bacilli seven weeks later, and in the lungs were found a number of minute, hard and evidently retrogressing nodules. As a typical example of the immunity conferred we quote the record of ass No. 8: April 8, 1902, 1 gm. ground (killed) tubercle bacilli in saline solution; April 26, .02 gm. culture human tubercle bacilli; May 10, .05 gm. ibid; June 18, .01 gm. *Perlsucht* culture, and September 18, .02 gm. ibid. The animal is living and apparently healthy, and has been repeatedly tested with doses of virulent bovine tuberculosis cultures, rapidly fatal for the controls. None of the immunized animals

in nine out of every ten cases. In his experience the cases with a longer period of incubation ran a milder course than the others, either from lesser virulence on the part of the germs or greater resisting power of the tissues.

114. Improved Syringe for Treatment of Gonorrhea.—The same writer describes and illustrates a syringe which consists of a rubber bulb, a connecting tube with valve, and the glass syringe proper. He claims that it acts with such delicacy and precision that there is no fear of its getting out of order, but its principal advantage is that the amount injected always corresponds to the varying capacity of the anterior portion without forcing the sphincter. It thus allows thorough and exclusive treatment of the anterior portion. He reviews the history of syringe treatment from the days of ancient Egypt, and enumerates the conditions for success. The capacity of the syringe must be at least 21.5 c.c., as the capacity of the anterior portion ranges from 4 to 21.5 c.c. For injections into the posterior portion the capacity should be 25 c.c. The pressure of the injection should not be above 1/10 of an atmosphere, as the elastic pressure of the sphincter is only 1/9 to 1/7. The injections should be made slowly, bearing in mind this elastic action of the sphincter. They should be brief and often repeated, as the sphincter becomes fatigued easily. Protracted injections for this reason should be made under low pressure, and the urethra only half filled. In injecting the posterior portion the bladder should be emptied and the patient should urinate during the injection, as this reduces the pressure to its lowest point, 1/20 atm.

116. One Cause of Iodoform Eruptions.—Audry states that he has ceased to have any iodoform eruptions in his practice since he has refrained from using iodoform on a patient who is taking mercury in any form. He thinks the eruption is in fact a "hydrargyride" induced by the iodoform.

124. New Method of Treating Lupus.—Dreuw has been applying for four months at Unna's clinic a combined method of treating lupus, which has had unexpectedly fine and rapid results in the 9 cases in which it has been used. Some of the patients had been under treatment for twenty to twenty-two years, and all were delighted at the cosmetic results obtained by the new method. Time alone will reveal whether the cure is permanent, but the prospect is encouraging, as even with the diascope no nodules can be detected. Tuberculous ulcers and granulations healed under this treatment remarkably well and promptly. One of his patients had tuberculous ulcerations on nose, cheeks and at the corners of the mouth. All the lesions have healed over during the five weeks of treatment and the interference with eating vanished after the first sitting. One patient had suffered for twenty years with an exfoliating lupus covering face and lids. The entire surface has healed over with a smooth and shiny surface. He adds that no time nor expense is required for this method of treatment which is within the reach of every practitioner and patient. The procedures are not painful and no symptoms of intoxication have been observed in any instance. The method is a combination of refrigeration with ethyl chlorid and the application of crude hydrochloric acid to the nodules, rubbing it in until it smarts. A region about the size of a dollar is sprayed with the chlorid until covered thick with ice. A cotton-wound stick is then dipped in the acid and it is rubbed into the lupous patch as hard as the patient can bear except in case of exfoliating lupus or tuberculous lesions, in which the pressure need not be so energetic. The acid is rubbed in until the epidermis at the spot forms a grayish soft mass. This is cast off in the course of a few days without leaving any deep lesion. The cauterization is never deep. After this destruction of lupous tissue the epidermis is regenerated from below. In one of his cases a recurring lupous patch on the cheek was cauterized away in a single sitting. Four weeks later the entire granulating surface was covered with apparently healthy epidermis. If the acid becomes diluted with the melting ice it loses its efficacy and a fresh cotton-tipped stick should be taken. The acid is not painful when applied only to the frozen surface, and any tendency to painfulness is combated by renewed application of the ethyl chlorid. It is possible to go over large surfaces in this way at a single sitting. The cauterizing action of the acid does not extend beyond the spot treated. He found it an advantage in some cases, when the nodules had disappeared to the eye, but could still be seen by the diascope, to paint them with ink. This showed through the layer of ice and he could thus apply the acid exactly where needed. Bleeding is soon arrested by the cauterization. He believes it might be advisable in case of very extensive lupus to administer chloroform and go over the entire surface at a single sitting.

Gazzetta degli Ospedali, Milan.

Last indexed page 817.

126 (No. 74.) Cirrosi portale atrofica asplenomegalica come malattia prevalentemente congenita. A. Ferrannini.
127 Sulla tubercolosi sperimentale del cane e sulla tossiemia che ne consegue. Casavecchia.
128 Le iniezioni endovenose di sublimato nella cura della sifilide. Gravagna.
129 (No. 77.) Acute Infectious Liver. A. Nizzoli.—Il fegato infettivo acuto in una forma morbosa non ancora cognita.
130 Antitossine ed agglutinine nel sangue di animali immunizzati. F. Figari.
131 Il nucleone nello sperma. E. Cavazzani.
132 Sulla cura delle infezione puerperali. G. Monzardo.
133 La sciatica curata colle iniezioni locali di antipirina. P. Adolfo.
134 Medicatura cacodilica. B. Domenico.
135 (No. 80.) Dell' azione del nucleoproteide di sangue eterogeneo sul numero e la proporzione dei globuli. G. Guerrini.
136 Sputa as Culture Medium. G. Guyot.—Léspettorato come mezzo di coltura pel bacillo della tubercolosi.
137 Study of Portal Circulation. E. Aievoli.—Derivazione chirurgica del sangue dal circolo portale.
138 (No. 83.) Contributo alla patogenesi della bronchopneumonite consecutiva alla operazione del gozzo (on the throat). F. Carini.
139 Incontinenza notturna d'orina e vegetazioni adenoidi. U. Melzi.
140 Tetano ed acido fenico. G. G. Deplano.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

Text-Book of Histology. Including the Microscopic Technic. By Dr. Philipp Stöhr, Professor of Anatomy at the University of Würzburg. Fifth American from the Tenth German Edition. Translated by Dr. Emma L. Bilstein, Formerly Director of the Laboratories of Histology and Embryology, Woman's Medical College of Pennsylvania. Edited, with Additions, by Dr. Alfred Schaper, Professor of Anatomy, University of Breslau. With 353 Illustrations. Cloth. Pp. 485. Price, $3.00 net. Philadelphia: P. Blakiston's Son & Co. 1903.

A Handbook of Obstetric Nursing. For Nurses, Students and Mothers. Comprising the Course of Instruction in Obstetric Nursing Given to the Pupils of the Training School for Nurses Connected with the Woman's Hospital of Philadelphia. By Anna M. Fullerton, M.D., Formerly Obstetrician, Gynecologist and Surgeon to the Woman's Hospital of Philadelphia. Sixth Revised Edition. Illustrated. Cloth. Pp. 270. Price, $1.00 net. Philadelphia: P. Blakiston's Son & Co. 1903.

Scheme for the Differential Testing of Nerves and Muscles. For Use in Diagnosis. By J. Montgomery Mosher, A.M., M.D., Clinical Professor of Insanity, Neurology and Electro-therapeutics, Albany Medical College. Illustrated. Cloth. Pp. 58. Price, $1.00 net. Albany, N. Y.: Brandow Printing Company. 1903.

Yearbook of the United States Department of Agriculture. 1902. Cloth. Pp. 912. Washington: Government Printing Office. 1903.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. Army, under orders from the Adjutant-General's Office, Washington, D. C., for the week ending Saturday, Sept. 12, 1903:

Brown, Orville G., first lieut. and asst.-surgeon, will proceed to Washington Barracks and report, not later than September 12, for temporary duty thereat during the absence of Major Henry P. Birmingham, surgeon, and, on the return of Major Birmingham, surgeon, will rejoin his proper station.

Foster, Charles L., first lieut. and asst.-surgeon, will proceed to Fort Washington for temporary duty during the absence of First Lieut. Charles R. Reynolds, asst.-surgeon, and, on the return to duty of the latter officer, will rejoin his proper station.

Geer, Charles C., first lieut. and asst.-surgeon, is granted an extension of leave for one month on account of sickness.

Jones, John F., contract surgeon, is granted an extension of leave for one month.

Koyle, Fred T., contract surgeon, is relieved from further du in the Division of the Philippines, and will, on the expirati his present leave, proceed to Fort Clark for duty.

Page, Henry, captain and asst.-surgeon, is relieved from duty at Fort Mason and will report to the commanding general, Department of California, for transportation to the Philippine Islands on the transport to sail from San Francisco on October 1, and will report to the commanding general, Division of the Philippines, for assignment to duty.

Peed, George P., first lieut. and asst.-surgeon, is relieved from further duty at the U. S. General Hospital, Washington Barracks, and will proceed to Fort Bayard for duty.

Reynolds, Frederick P., captain and asst.-surgeon, is granted leave of absence for ten days from about September 10.

Reynolds, Charles R., first lieut. and asst.-surgeon, will, on the arrival of First Lieut. Charles L. Foster, asst.-surgeon, proceed to Washington Barracks and report at the General Hospital for duty with Company of Instruction No. 1, Hospital Corps, during the Army maneuvers to be held at West Point, Ky., and Fort Riley, Kas., and, on the return of the Company of Instruction to Washington Barracks, will rejoin his proper station.

Truby, Albert E., captain and asst.-surgeon, is relieved from further duty at West Point, N. Y., and will proceed to Alcatraz Island, Cal., for duty.

Tetamore, Frank L. R., contract surgeon, having completed the duty for which he was ordered to Fort Grant, will, on the expiration of his present leave, proceed to San Francisco and report for duty with the Seventh Infantry, en route to the Philippine Islands and, on arrival at Manila, will report for assignment to duty.

Williamson, Llewellyn P., first lieut. and asst.-surgeon, is relieved from further duty at the U. S. General Hospital, Presidio, Cal., and will proceed to Jefferson Barracks for duty.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending Sept. 19, 1903:

Asst.-Surgeon J. P. Trainor, from the *Solace* to the Naval Station, Pollock, P. I.

Medical Director Paul Fitzsimmons, from Naval Hospital, Newport, R. I., home, and wait orders.

Medical Inspector H. Wells, from Navy Yard, Boston, to Naval Hospital, Newport, R. I.

Medical Inspector E. Z. Derr, to Navy Yard, Boston.

Medical Inspector D. N. Bertolette, from Naval Medical Examining Board to Naval Dispensary, Washington, D. C.

Surgeon G. T. Smith, to Naval Hospital, Norfolk, Va.

Surgeon M. F. Gates, from the *Atlanta,* two weeks' leave, to Philadelphia Hospital.

Surgeon W. M. Wheeler, from the *Alabama* to Naval Hospital, Newport, R. I.

Asst.-Surgeon J. A. Randall, commissioned June 26.

A. A. Surgeon A. H. Wise, to Naval Hospital, Philadelphia.

Surgeon J. M. Edgar, to the *Rainbow.*

Asst.-Surgeon J. L. Neilson, from the *Iris* to Naval Station, Cavite, P. I.

Asst.-Surgeon A. E. Peck, from Naval Station, Cavite, to the *Iris.*

Surgeon G. A. Lung, to the *Columbia.*

Surgeon C. H. T. Lowndes, to the Naval Hospital, Boston.

A. A. Surgeon P. L. Cocke, resignation accepted, to take effect September 21.

The following assistant surgeons were ordered to report September 30 at the Naval Medical School, Washington, D. C., for special course of instruction: W. S. Hoen, J. P. DeBruler, J. A. Randall, from the Naval Hospital, Norfolk, Va.; A. D. McLain, from the U. S. R. S. *Wabash;* C. C. Grieve, from the Navy Yard, Boston; A. J. Gieger, from Naval Medical Examining Board, Washington, D. C.; R. L. Sutton, from special duty, Baltimore; J. S. Woodward, P. T. Dessez, from Naval Hospital, Washington, D. C.; J. R. Dykes, from the U. S. R. S. *Franklin;* P. S. Rossiter, T. N. Pease, B. H. Dorsey, from Naval Hospital, Newport, R. I.; R. E. Riggs, from Navy Yard, Washington, D. C.; W. B. Smith, from Naval Hospital, Pensacola, Fla.; F. W. S. Dean, C. F. Ely, F. G. Abeken, from New York Hospital; W. W. Verner, H. L. Brown and W. H. Rennie, from Philadelphia Hospital; C. E. Ryder, J. D. Manchester, S. L. Scott, from Naval Hospital, Chelsea, Mass.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Sept. 17, 1903:

Assistant Surgeon-General A. H. Glennan, to proceed to Wilmington, Del., for special temporary duty, on completion of which to rejoin station.

Assistant Surgeon-General G. T. Vaughan, granted leave of absence for fifteen days from Sept. 18, 1903.

Surgeon C. T. Peckham, granted leave of absence for one and one-half months from Sept. 16, 1903.

P. A. Surgeon Joseph B. Greene, granted leave of absence for one day, Sept. 16, 1903.

P. A. Surgeon R. H. von Ezdorf, to proceed to New Orleans, and wire arrival; to proceed to Laredo, Texas, for special duty, September 16.

Asst.-Surgeon T. F. Richardson, relieved from duty at Tampico, Mexico, and directed to rejoin his station at New Orleans, and inspect en route Linares, Monterey and Victoria, Mexico, and Laredo and Eagle Pass, Texas, September 14. Order of September 14 amended so that he will return direct to Laredo, Texas, and inspect service en route to New Orleans.

A. A. Surgeon L. C. Bean, granted leave of absence for four days from September 15.

A. A. Surgeon B. W. Goldsborough, granted three weeks' leave of absence from September 10.

A. A. Surgeon W. H. Marsh, granted leave of absence for three days from Sept. 18, 1903.

A. A. Surgeon F. R. Smyth, granted two weeks' leave of absence from Sept. 10, 1903.

A. A. Surgeon W. S. Walkley, granted leave of absence, September 14 to 18, inclusive.

A. A. Surgeon D. M. Echemendia, granted leave of absence for seven days from Aug. 27, 1903, on account of sickness.

Pharmacist F. S. Goodman, first class, granted leave of absence for five days from Sept. 5, 1903, under provisions of paragraph 210.

Pharmacist S. W. Richardson, first class, relieved from duty at Portland, Me., and directed to report at Bureau for temporary duty.

Pharmacist Charles R. McBride, third class, relieved from duty at Stapleton, N. Y., and directed to proceed to Manila, P. I., and report to P. A. Surgeon V. G. Heiser, chief quarantine officer, for assignment to duty.

Pharmacist C. H. Bierman, third class, directed to report at Bureau for duty.

Pharmacist George I. Van Ness, directed to proceed from McLean, Ill., to Stapleton, N. Y., and report to medical officer in command for duty and assignment to quarters.

BOARDS CONVENED.

Board convened at San Francisco Sept. 25, 1903, for purpose of making physical examination of applicant for position in Revenue Cutter Service. Detail for board: P. A. Surgeon W. G. Stimpson, chairman; Asst.-Surgeon Carl Bemus, recorder.

Board convened at Boston Sept. 15, 1903, for the physical examination of First Lieut. George M. Daniels, Revenue Cutter Service. Detail for the board: Surgeon R. M. Woodward, chairman; Asst.-Surgeon W. C. Rucker, recorder.

APPOINTMENTS.

Clarence H. Bierman, pharmacist, third class.
George I. Van Ness, Jr., pharmacist, third class.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Sept. 19, 1903:

SMALLPOX—UNITED STATES.

California: Los Angeles, Aug. 29-Sept. 5, 3 cases; San Francisco, Aug. 30-Sept. 6, 3 cases.

Illinois: Belleville, Aug. 23-Sept. 12, 13 cases; Chicago, Sept. 5-12, 4 cases.

Indiana: South Bend, Sept. 5-12, 1 case.

Louisiana: New Orleans, Sept. 5-12, 1 case, 5 days in city.

Massachusetts: Fall River, Sept. 5-12, 3 cases.

Michigan: Marquette, Aug. 29-Sept. 5, 1 case; Port Huron, Aug. 31-Sept. 16, 2 cases.

Minnesota: Stearns County, Aug. 31-Sept. 7, 3 cases.

Missouri: St. Louis, Sept. 5-12, 2 cases.

New York: Niagara Falls, Sept. 5-12, 1 case.

Pennsylvania: McKeesport, Aug. 31-Sept. 5, 1 case.

Utah: Ogden, Aug. 1-31, 11 cases; Salt Lake City, Aug. 29-Sept. 5, 2 cases.

SMALLPOX—INSULAR.

Philippines: Manila, July 18-Aug. 1, 2 cases.

SMALLPOX—FOREIGN.

Belgium: Brussels, Aug. 22-29, 1 death.

Colombia: Bocas del Toro, Aug. 25-Sept. 1, 2 cases.

France: Paris, Aug. 15-22, 1 death.

Great Britain, Leeds, Aug. 29-Sept. 5, 6 deaths; Liverpool, Aug. 22-29, 7 cases, 1 death; Manchester, Aug. 22-29, 1 case.

India: Calcutta, Aug. 8-15, 6 deaths.

Italy: Rome, May 23-30, 1 death.

Mexico: City of Mexico, Aug. 23-30, 6 cases, 4 deaths; Vera Cruz, Aug. 29-Sept. 5, 2 cases, 1 death.

Russia: Moscow, Aug. 16-22, 1 case; Riga, June 1-30, 13 deaths; St. Petersburg, Aug. 16-29, 18 cases, 1 death; Warsaw, Aug. 8-22, 5 deaths.

Spain: Barcelona, Aug. 1-15, 7 deaths.

Switzerland: Geneva, Aug. 21-28, 1 case.

Turkey: Constantinople, Aug. 23-30, 1 death; Smyrna, Aug. 8 30, 109 deaths.

YELLOW FEVER.

Colombia: Panama, Aug. 31-Sept. 7, 2 cases, 1 death.

Costa Rica: Limon, Aug. 27-Sept. 3, 2 deaths.

Mexico: Monterey, Sept. 13, present; Nuovo Laredo, Sept. 15, 1 death; Tampico, Aug. 22-Sept. 5, 3 deaths; Vera Cruz, Aug. 29-Sept. 5, 50 cases, 19 deaths.

PLAGUE—UNITED STATES.

California: San Francisco, Aug. 9-21, 2 deaths.

PLAGUE—INSULAR.

Hawaii: Hilo, Sept. 14, 1 death; Honolulu, Sept. 1, 1 death.

Philippines: Manila, July 18-Aug. 1, 6 cases, 6 deaths.

PLAGUE—FOREIGN.

Africa: Cape Colony, July 19-25, 1 case.

China: Hongkong, July 25-Aug. 1, 10 cases, 6 deaths; Inkow, Sept. 7, present.

Egypt: Alexandria, Aug. 8-14, 8 cases, 6 deaths; Damiette, Aug. 8-14, 2 cases, 2 deaths.

France: Marseilles, Sept. 13, present.

Japan: Yokohama, July 25-Aug. 15, 1 death.

Mauritius: June 5-July 2, 5 cases, 5 deaths.

New Caledonia: Aug. 13, 26 cases, 18 deaths.

Straits Settlements: Singapore, July 18-Aug. 1, 3 deaths.

CHOLERA—INSULAR.

Philippines: Manila, July 18-Aug. 1, 15 cases, 14 deaths; Provinces, July 18-Aug. 1, 2,141 cases, 1,488 deaths.

CHOLERA—FOREIGN.

India: Calcutta, Aug. 8-15, 10 deaths; Madras, Aug. 8-14, 2 deaths.

Straits Settlements: Singapore, July 18-25, 39 deaths.

Turkey: Baalbeck, Aug. 22, present; Damascus, Aug. 22, present; Hama, Aug. 22, present; Tripoli, Aug. 22, present.

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Addresses.

THE EVIL OF EPONYMS.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON LARYNGOLOGY AND OTOLOGY, AT THE FIFTY-FOURTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION AT NEW ORLEANS, MAY 5-8, 1903.

GEORGE L. RICHARDS, M.D.
FALL RIVER, MASS.

As Chairman of the Section on Laryngology and Otology of the American Medical Association, I bid you, the members of this Section, a most cordial welcome to the Fifty-fourth Session of this Association and to the Fifteenth Session of this Section. The secretary, Dr. Barnhill, and myself have labored for some months in the preparation of the annual feast, and I am sure that the menu which we have now ready for you will be in no way inferior to the banquets which we are accustomed to enjoy. For many years the papers which have been read before this Section of the American Medical Association have not been surpassed by the papers presented in the meetings of any of the special societies in the United States; while this Section has the great advantage that it has no red tape attached to it, but is open to every earnest worker in the field of laryngology and otology, the only requirement for admission being that of membership in the American Medical Association. Furthermore, each paper read has the advantage of publication through The Journal of the Association, which is to-day the largest, both in size and circulation, of any medical journal in the country. So, it seems to me, that membership in this Section is to be sought and estimated as a privilege by all workers in laryngology and otology, and especially by those workers in this field who are not at the present time fellows of any of the special societies.

It is customary at this time for the chairman to make a brief report of the general progress in his department for the preceding year. This was most ably done last year by my predecessor, Dr. Makuen, but, unfortunately, events have been such that I am unable to present to you any such review. I accordingly invite your attention for a few moments to a subject which I have not as yet heard discussed to any extent in any Section, yet which seems to me to need ventilating. I refer to the growing tendency with the advance of medicine and surgery to associate methods of treatment, and especially operations, with the names of their real or supposed originators, and to describe them under the heading of this or that person's operation or method of treatment. Laryngology and otology is not so great a sinner in this regard as some of the other specialties, yet we are far from guiltless, and much confusion results from this, the reader or auditor often being in doubt as to exactly what is meant by the particular operation described under someone's name.

It seems to me that a surgical operation should be described in anatomic terms, and a medical procedure or method of treatment in language sufficiently clear so that any physician familiar with the ground principles should know what is meant. The surgeon is expected to know his anatomy, but it is too much to expect him to remember every operation and to have a clear picture of it when it is referred to under the name of its originator. By the time Jones' operation has been two or three times modified by Smith and Brown, and is then inaccurately described by Robinson, who refers to it as Jones' operation, Jones himself would probably deny it as his child. If every operative procedure were described in anatomic terms, no confusion could arise, and the reader of an article would know exactly what was meant by the author. It might take a few more words now and then, but this would be more than compensated for by the clearness of description which would of necessity result. I very much doubt whether the members of the Section now present would care to take an examination on all of the following procedures, and yet these are terms which are used as descriptive of operations and methods in use in our specialty, and all of which I have culled in a cursory examination of some recent laryngologic and otologic literature. Furthermore, I am inclined to think that if we should all give our ideas in regard to them according to the mental picture which we have of the individual operation or procedure there would be much variation in the descriptions:

Schäffer's operation on frontal sinus.
Jansen's operation through the antrum.
Cooper's method of operating on the antrum.
Boenninghaus' operation on the antrum.
Walker Downey plan of closing frontal sinus wound.
Jansen's operation for removal of orbital roof.
Nebinger-Praun operation.
Mikulicz's operation.
Ogston-Luc operation.
Luc operation.
Caldwell-Luc operation.
Killian's operation.
Küster's operation.
Czerny's operation.
Löffler's operation.
Betzold's mastoiditis.
Schwartze's operation.
Hessler's operation.
Stacke's operation.
Schwartze-Stacke operation.
Freudenthal emulsion.
Zaufall's operation.
Panse's flap.
Korner's flap.
Schwabach's test.
Rinne's test.
Weber's test.
Bezold's triad test.
Asch operation.
Roe operation.
Sokolowsky's operation.
Watson-Gleason operation.
Ingall's operation.
Meyer-Asch flap operation.
Watson-Gleason flap operation.

These examples could be multiplied much farther, but that is hardly necessary. We have all been sinners in this regard, and, to a certain extent, must be, since various procedures, such as Politzerization, Rinne's test and Meniere's disease, have acquired a place in the literature of medicine which is permanent. Even some of these names are wrongly used. What is described in literature as Meniere's disease does not, as a rule, correspond except very remotely to what was originally described by Meniere as labyrinthine vertigo due to hemorrhage in the labyrinth.

I wish, therefore, to emphasize the plea that in the papers which we write we describe procedures as such. It will make our literature always comprehensible to the next generation as well as to our own and add much to the accuracy of our work.

In conclusion, I welcome you all once more, and hope that in the ensuing discussions the remarks will be confined directly to the topic as treated by the reader rather than wandering off in the discussion of the general subject.

THE FIELD OF THE SECTION ON HYGIENE AND SANITARY SCIENCE.

CHAIRMAN'S ADDRESS BEFORE THE SECTION, AT THE FIFTY-FOURTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION AT NEW ORLEANS, MAY 5-8, 1903.

HENRY M. BRACKEN, M.D.
MINNEAPOLIS.

The question may reasonably be raised as to whether sanitary science should have recognition through a section in the American Medical Association. The answer, I think, must be in the affirmative.

Assuming this to be the fact, the next question is as to the function of the Section, and to this the answer should be: To look after those matters that have a specific bearing on sanitary science and hygiene. This would appear to embrace questions pertaining to vital statistics, water, sewage and other topics of like nature. The fact must not be lost sight of that these topics are fully considered by various sanitary bodies, such as the American Public Health Association, the Conference of State and Provincial Boards of Health of North America, etc. This Section should be working in harmony with these strictly sanitary associations.

I take it that matters pertaining strictly to preventable diseases should be dealt with in the Section on Practice of Medicine, rather than in this Section, otherwise there would be two divisions of medical topics, viz.: preventable and non-preventable diseases. Were this true the Section on Practice of Medicine would truly be in a sad plight, or there would be the lapping over of sectional work. This has been true in the past. Smallpox, during the past few years of this Association's work, has been discussed in the sections on medicine, on sanitary science and on skin diseases. Other diseases, such as tuberculosis, pneumonia, typhoid fever, etc., have been discussed in different sections. While to a certain extent this may be unavoidable, as a general principle it is decidedly faulty. The discussion of any one topic in different sections fails to secure full consideration because those interested in the subject are separated by sections. If a specific time could be set for any given paper in a section and this time be definitely known by all members of the Association, the objection to discussing one topic in various sections would be minimized, for members might go from section to section, following the subjects in which they were interested, but such a plan this Association is quite impossible.

I take it as a recognized fact that all physicians who sanitarians should be medical men, or at least interested in general medicine. If this is true every medical man in this Section should register in the Section on Practice of Medicine. If he registers in that Section he should attend it. What is to be gained by a small party of specialized medical men sitting together in this room to discuss a broad subject like that of tuberculosis or typhoid fever while the great body of medical men are discussing the same subject in one of the largest and most important sections of the Association—that on medicine? If we have anything good to say on the subject the general medical man should hear it. The general medical man can not discuss these or other subjects relating to preventable diseases without saying something which every sanitarian should hear.

I would suggest that in the future the work of this Section should be concentrated as much as possible on strictly sanitary or hygienic subjects. This work could be easily covered in two days.

The chairman of this Section should make it a point always to keep in touch with the chairman of the Section on Practice of Medicine. So far as possible, subjects relating to communicable diseases should be so arranged on the program of the Section on Practice of Medicine as not to conflict with sessions of this Section. The program has been so planned this year between Dr. Thayer, chairman of the Section on Practice of Medicine, and myself as to give a day in joint session. The subjects assigned for that day—typhoid fever, plague and yellow fever—are truly of as much interest to the sanitarian as to the medical practitioner. There are other subjects on the program of the medical section which should interest us, such as dysentery.

If we wish to become narrow in our studies as specialists we will organize ourselves into a little mutual admiration section. If, on the other hand, we wish to pursue the course that will be of greatest benefit to the profession, we will seek to be recognized as medical specialists thoroughly in touch with the great body of medical men. I hope all here will agree with me that the latter is the better course for us to follow.

Original Articles.

APPENDICITIS FROM THE STANDPOINT OF THE GYNECOLOGIST.*

HENRY P. NEWMAN, A.M., M.D.
CHICAGO.

In general, the diagnosis of appendicitis is not difficult to-day. Scarcely a decade and a half ago we were either losing the severe cases as acute peritonitis or inflammation of the bowels, or nursing them through the more protracted stages of typhlitis or perityphlitis, while the mild catarrhal cases were regarded as attacks of cholera morbus or congestion of the bowels. To-day the laity are almost as alert as the practitioners to recognize even the premonitory symptoms.

When we meet exceptions to this rule, the case is apt to be one associated with or simulating disease of the pelvic organs in the female. A case in point is one which was brought to my attention recently. A young girl of about sixteen years of age, healthy in appearance, but nervous and slightly anemic, suffered from recurrent attacks of pain and soreness in the lower abdomen.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Obstetrics and Diseases of Women, and approved for publication by the Executive Committee: Drs. A. Palmer Dudley, H. P. Newman and J. H. Carstens.

These attacks occurred every three or four weeks, and were associated with the menstrual period. The distress would last but a few days, and this, the periodicity and her age, led her father, a physician, to bring her to me for gynecologic treatment. On examination I was unable to locate any disease of the genital organs, but made out, I thought, an offending appendix, and so informed the physician. Being a good all-round diagnostician and something of a surgeon himself, he had made his own conclusions, based on the prominent symptoms, and was not satisfied with the diagnosis. He took his daughter home, but later returned to the city, this time to consult a prominent surgeon. He did not fully verify my diagnosis, giving as his opinion that exploratory work should be done; that while the appendix might be involved, the principal trouble must be in the generative organs. The case went on for some months, but was finally operated on, and the appendix was found elongated, inflamed and attached at its extreme distal end to the right ovary. There was no other pelvic lesion.

The congestion incident to ovulation and the menstrual function was probably the cause of the lighting up of these exacerbations of catarrhal appendicitis, the supposed dysmenorrheal attacks being simply appendiceal colic.

After removal of the appendix, there was prompt and complete relief of symptoms. The case is interesting because of the pronounced symptomatology calling for relief, and because of the unusual attitude of the consultants, each one excluding his own specialty, the gynecologist diagnosing a surgical, and the surgeon a gynecologic disease.

This is only one of many cases in which the diagnosis of pelvic and appendiceal lesions may be obscured. In the opinion of some writers, differential diagnosis before operating in pus cases is not so very important as the indications are the same in either case. This is the view of Rostovzeff[1] of St. Petersburg, who insists on great care in examining the entire pelvic field at the time of operating. In salpingitis look for an inflamed appendix, in appendicitis look for disease of the adnexa. This is wisdom itself, but does not, it seems to me, compensate for the lack of an intelligent, clear diagnosis before operating.

The same author calls attention to the intensity of the infection caused by pus from an abscess in the appendix as compared with that from pyosalpinx. In his experience, general peritonitis due to appendicitis was invariably fatal, whereas a number of cases of general peritonitis originating in the genital organs terminated favorably.

Confusion in diagnosis may arise from the different localities in which the appendix is to be found. Its frequency in the pelvic basin has led to a distinct classification by Poncet and Dormoy of pelvic appendicitis. This nomenclature is not to distinguish it pathologically from appendicitis in any other locality, but to suggest the rational surgical treatment which should be through the vagina or rectum. Delore[2] cites some unusual instances of large collections of pus low in the pelvis, due to a diseased appendix, and evacuating through the rectum or vagina.

Downes[3] reports numerous cases of mistaken diagnosis in cases of appendicitis in the female.

Cumston[4] has had some interesting cases in which concomitant symptoms of appendicitis and tubo-ovarian diseases made diagnosis difficult, and says: "I could quote a number of other instances where lesions of the adnexa were taken for appendicitis." Deaver[5] says that in pyosalpinx due to appendicitis the symptoms are those of appendicitis in the pelvis, with dysmenorrhea and irregular menstruation. There is no history of gonorrheal infection and no indurated feeling of the vagina.

The work which Peterson is doing in this line is careful and accurate, and his further contribution will be received with attention. His first article[6] reports eighty-seven cases of abdominal section in nearly all of which the appendix has been examined as a routine procedure. At first it was examined, reported normal or abnormal, and removed only when diseased. Later it was removed as a routine practice whenever warranted by the condition of the patient. In his last thirty-four consecutive cases, the appendix was thus removed, and in just half this number, seventeen cases, was it found diseased. His collecting and tabulating of cases is specially instructive to the gynecologist, since the work was done with the idea of throwing light on the relation between appendicitis and pelvic disease, and he excluded from the clinic as nearly as possible all those cases where the diagnosis of pelvic disease was not absolutely clear. "Whenever," he says, "it was suspected that the primary focus was situated in the appendix the case was referred to the surgical clinic."

It therefore follows:

1. That the abdomen should be examined in all important pelvic cases and vice versa.
2. Functional disturbance in the pelvis may produce disturbance in the neighboring abdominal viscera.
3. In opening the abdomen for pelvic disease the appendix should always be examined.
4. If catarrhal, adherent or containing concretions, it should be removed.
5. It is not sufficient to break up or separate adhesions of an attached appendix.
6. As the macroscopic examination of the appendix is not always conclusive, its removal or "prophylactic appendectomy," when the abdomen is already open, should be determined by the best judgment of the surgeon and the condition of the patient in each individual case.
7. Any appendiceal or localized peritonitis may be an active factor in the immediate or remote production of intestinal obstruction. Strangulated intra-abdominal hernia has occurred as a result forty years after the primary lesion, and with entire freedom from symptoms during the long interim.
8. In opening the abdomen for intestinal obstruction the appendix and pelvic viscera should be looked to for the cause of trouble.
9. In removal of the appendix the invaginating operation should be done, or such other painstaking work as all intraperitoneal affections demand, to protect the wound surface from subsequent adhesions.
10. The frequency of implication of the appendix by contact with diseased pelvic genital organs (Kelly cites twenty-seven adherent appendices in one hundred hystero-salpingo-oöphorectomies, and the figures of Peterson correspond) renders important not only the early removal of pus tubes, infected cystic tumors and the like, but also after operations where the appendix re-

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[1] Rousski Vratch, Nos. 20, 21 and 22, 1902. Abst. in The Journal A. M. A., Sept. 20, p. 732.

[2] Bull. Méd., Paris, xv, 769.

[3] St. Louis Med. and Surgical Journal, 1902, 82, 28.

[4] Amer. Jour. Med. Sciences, Philadelphia, 1902.

[5] Amer. Medicine, Dec. 6, 1902. Abst. in The Journal A. M. A., Dec. 20, p. 1617.

[6] Amer. Gyn., August, 1902.

mains, its careful protection from any possible denuded peritoneal surfaces or involved areas.

11. Barring the greater liability of infection from neighboring viscera and the somewhat greater difficulty of differential diagnosis in the female, we have more available means of exploration, a better prognosis and greater facilities for operative and non-operative relief.

100 State Street.

DISCUSSION.

Dr. E. Reynolds, Boston—We are all familiar with the class of cases in which the symptoms are not in keeping with the results of the physical examination; cases in which neurasthenia, malnutrition and marked digestive troubles are associated with occasional moderate or even severe pain in the right side, and yet we can not feel anything distinctly. Our course of action must be guided by the degree of the symptoms presented. If the patient's health is ruined by her condition, her case justifies an operation. If she is not suffering seriously from the symptoms we are not justified in operating unless we can make a definite diagnosis. I have had a number of cases lately in which the conjunction of symptoms pointed very strongly to appendicitis. I have come to associate the conjunction of even moderate tenderness on the right side, with right-sided pain, intestinal flatus and usually some mucus in the dejections, especially if associated with a history of nausea, vomiting in pregnancy or menstrual sick headache, with appendicitis. The presence of a majority of these symptoms is very strongly suggestive of chronic conditions of the appendix. Beyond question we are all removing the appendix to-day more frequently than we did two years ago. And I am inclined to think that we shall remove it still more frequently in the future. I believe that we should remove every abnormal appendix, but I think we are going too far when we advocate its invariable removal. I think it is worth remembering that we have all been doing many abdominal sections for many years without removing the appendix, and I should be curious to know how many operators there are in this room who have had many cases where they have operated and have not looked at the appendix in which that appendix ever gave trouble afterward. The last case I operated on showed a condition of the appendix that I have seen a number of times. In these cases the ligament which originally forms the mesentery of the appendix, the iliolumbar ligament, which in the primitive state also forms the mesentery of the colon, and the mesoovarium, persisted in its fetal state, and the symptoms were apparently referable to the persistence of this ligament. In the last case it caused a kinking of the appendix and connected it with the right kidney. The more we study the anatomic conditions of these chronic appendiceal cases the more we shall get at the bottom of them, their causes and their treatment.

Dr. Edwin Ricketts, Cincinnati—To say that we can in all of these cases differentiate, is, I think, putting it rather strong. I agree with the previous speaker that to say that in all instances in which the abdomen is opened the appendix should be removed is a step too far in advance. In many cases in which the right ovary or tube is attached to the appendix we have a train of symptoms that is rather peculiar, but in many of these cases I am certain that we can make a diagnosis. It is an attack of inflammation that is peculiar to the appendix.

Dr. Wm. W. Wathen, Louisville, Ky.—We are discussing the relation of appendicitis to disease of the pelvic structures, particularly of the ovaries and tubes. I can not concur in an opinion that connects the occurrence of appendicitis with an ovary and tube where the anatomic and physiologic conditions are normal. Hence when we have appendicitis arising in the pelvis we must have some pathologic condition that causes it, although the pathologic condition may have been so modified that it is observed with difficulty. Recently I removed the appendix in about eight cases of disease of the pelvic structures, and in each the diseased condition was caused by pus in the right side of the pelvis. In none was there any pus in the appendix, only a parenchymatous thickening and adhesions. In every laparotomy I feel that it is the duty of the operator to examine the appendix, and if it is at all diseased it should be removed, especially in pelvic inflammations, because appendices which are diseased as the result of a pelvic inflammation are long appendices that will again fall down, come in contact with the pelvic organs, and possibly become more inflamed. I do not believe, however, that a healthy appendix of usual length should be removed.

Dr. Paul Michinard, New Orleans—The question of appendicitis is one that interests me as a gynecologist, not from the operative phase, but from that of diagnosis between salpingitis and appendicitis. Any man with a certain amount of diagnostic skill can diagnose acute salpingitis from acute appendicitis, and any good gynecologist can do an appendectomy as well as a salpingectomy. But the question is, shall we tell the patient that he has a chronic right-sided salpingitis or a recurrent appendicitis? In the former case she is practically in no danger, but in the latter case there may be an acute gangrenous appendicitis that may at any time cause death. In chronic appendicitis the most intense pain is produced by pressure on the abdominal wall; in chronic salpingitis, in the right fornix, pressing with the finger in the vagina. Tumefaction in the first, by pressure on the abdominal wall; in the second, by firm pressure in the right vaginal fornix. We are more interested in the diagnosis than in the operation which we can all perform.

Dr. Wm. P. Manton, Detroit, Mich.—I wish to endorse Dr. Newman's paper fully. In many cases it is difficult to make a differential diagnosis. Often where there is no active salpingitis or appendicitis there may be an adherent appendix. You will invariably find a thickening on the right side and without difficulty can trace the adhesions up from the right fossa to the appendix, and also get a certain amount of impaired mobility of the cecum. No man, unless he has had a very large experience in abdominal surgery, is capable of saying from the macroscopic appearance of the appendix whether it is healthy or not. The idea that a normal-looking appendix should be left because attached only by very fine cobweb adhesions to the broad ligament or glued to the intestine, is absurd. For some years I have had nearly all appendices which I have removed examined microscopically, and in the vast majority of cases appendices which from their macroscopic appearance might be said to be normal, were found diseased when sectioned and examined. The mucous coat, and even the muscular coat, may be ulcerated through, and sometimes in imminent danger of rupture, when to naked-eye view the appendix appears perfectly normal. I believe that Dr. Newman is right when he advocates the removal of every appendix that is in any way connected with disease of the right appendages. Microscopic examinations will show that often when the organ appears to be normal it is in reality very much diseased.

Dr. Chas. S. Bacon, Chicago—I failed to hear any reference to the relation existing between appendicitis and obstetric complications. I believe that the obstetric side can not be omitted. The most important feature of the paper was the question of diagnosis. In appendicitis the question of the existence of pregnancy in its early stages is extremely important. After the pregnancy is established then the diagnosis between a complication of appendicitis and other forms of peritoneal inflammations is important. Pain is not so good a diagnostic point in the pregnant as in the non-pregnant state.

Dr. J. H. Carstens, Detroit, Mich.—The whole question seems to be revolving around the diagnosis. If we have an acute case of salpingitis, with uterus fixed and an exudate in the pelvis, there is no question about its being a pelvic cellulitis. We do not have that with appendicitis. When there is pain over the McBurney point in acute inflammation of the appendix then we have a uterus which is freely movable. Dr. Newman's paper referred to chronic cases in which there is no exudate in the pelvis; hence there can be no acute salpingitis. There is a certain amount of pain over the McBurney point, which there never is in salpingitis. When I get cases in which I do not know whether the tube or the appendix or both are diseased, but in which there is pain over the

McBurney point and a sudden squirming of the patient when she is touched, I insist on operating. Ordinarily with young people who go along without any particular trouble, and who suddenly develop a little pain in the right side, recurring every day or week, one can be almost positive that it is a case of appendicitis which requires an operation.

Dr. C. O. Thienhaus, Milwaukee, Wis.—I have pointed out in a published paper that in many cases of chronic catarrhal appendicitis one may find, clinically, dysmenorrhea and not so seldom shortening of the right broad ligament, inflammation of the right tube, with or without hydrosalpinx and inflammation of the ovary. The essential question in such cases is: Was the tube the primary focus of the infection and the appendix involved secondarily, or vice versa? I believe that in many cases in young girls which present the above symptoms and in which gonorrhea can be positively excluded the appendix was the primary seat of the malformation present and the female genital organs involved secondarily. It has been stated in literature that one very often finds paraovarian cysts, pelvic inflammatory cysts and ovarian cysts connected with chronic appendicitis. What is the reason? I believe that in general the appendix is a *locus minoris resistentiæ*, and that in many cases of inflammatory condition of the female genital organs on the right side the appendix becomes involved. I found an ovarian cyst in a woman three months pregnant who was lying in bed for two months with a diagnosis of appendicitis. On examining her I found a tumor in the pouch of Douglas of the size of a man's fist and made the diagnosis of ovarian cyst, explaining the clinical symptoms by twisting of the pedicle. At the operation I found a cyst with a long pedicle, which was not twisted nor showed signs of any previous twisting, but the appendix about 14 cm. long was adherent to the cyst and thrown around it at the point of connection of the cyst with the pedicle. There was prompt recovery after removal of the appendix and cyst and pregnancy was uninterrupted. In cases connected with abscesses in the pouch of Douglas one may encounter the greatest difficulties in regard to diagnosis.

Dr. J. Wesley Bovée, Washington, D. C.—We are getting a little too radical. I am sorry that Dr. Carstens brings in McBurney's point. I have found the cecum low down in the pelvis many times and I can not make the McBurney point chase the cecum all over the peritoneal cavity. Therefore, to rely on pain over the McBurney point as a symptom of appendicitis is an error. Another error is the practice of removing the appendix of every case in which we operate on the adnexa. I have repeatedly operated on cases such as ruptured tubal pregnancy, dermoid cysts, etc., in which I did not look at the appendix as I did not dare to take the time. In other cases I take enough time to look at the appendix, not to remove it. I remove it whenever the condition of the patient will permit, but there are cases in which it can not safely be done.

Dr. G. Betton Massey, Philadelphia—Since no mention is made as to whether the operation could have been avoided by medical treatment, we must conclude that the operation was necessary. I had a case recently that leads me to think that here, too, there is a chance for conservatism in the treatment of conditions where circumscribed colitis may be mistaken for appendicitis or salpingitis. The case was that of a young girl, very much run down in health, and very nervous. No abnormal physical conditions were found. The treatment that seemed to do a great deal of good was betanaphtholate of bismuth, though operation had been advised. I call your attention to the wisdom of treating the colon when you suspect that you have appendicitis, which is often an extension of a colonic trouble. Treat the colon, the original site of true appendicitis. It has been the result of my observation that many people with colonic irritation are passing their lives in ignorance of the fact, and it is probable that appendicitis is frequently a sequel of this condition.

Dr. J. L. McCollum, Chicago—I believe that there are cases in which no one can make a diagnosis. In cases in which we can demonstrate that there is no change in the tube and ovary we can exclude pelvic trouble; and in cases in which there is no decided tenderness over McBurney's point, no rigidity of the recti, we can exclude appendiceal trouble. I saw a young girl in consultation, and did not concur in a diagnosis of appendicitis made by one surgeon. The history apparently excluded any pelvic trouble. We operated and found that the appendix was normal but the tube diseased. We can not make a positive diagnosis in these cases because the findings are so contradictory. I am heartily in accord with the dictum to remove every appendix whenever possible. If I have the patient's consent, and if her condition will permit, I remove the appendix, even when I am doing a herniotomy. I have had no occasion to regret my radical procedures in this field, and the patients have always been satisfied with the result.

Dr. F. F. Lawrence, Columbus, Ohio—We are apt to forget that Nature is sometimes a very good physician. In cases of chronic peritonitis, tubercular or otherwise, in which it is necessary to open the abdomen, the separation of the adhesions is followed not only by relief of the symptoms within the peritoneal cavity, but if for any reason it is necessary to reopen the abdomen after some months, we find no sign of the former disease. That this also holds good in cases where we find peritoneal adhesions without pathologic conditions of the appendix, where we are operating for a right-sided tubal trouble, is undoubtedly true. I do not believe that the author intended to advocate the removal of normal appendices. No abdominal surgeon would presume to know more about what is good for man or woman than the Almighty who made them. We are assuming too much by removing such an organ which is doing no harm. Any diseased condition should be removed; normal structures, whatsoever they may be, should be left alone.

Dr. D. H. Craig, Boston—Four cases that have recently come under my notice are examples of the existence of the fold of the broad ligament constituting the lumbo-ovarian or appendiculo-ovarian ligament of Clado, and in three of the cases the presence of this structure was not suspected but was found during operations for other pelvic lesions. In the last case the operation was done with the distinct understanding that a definite diagnosis had not been made. Previous treatment for both ovarian conditions and appendicitis was of no avail. She was not an invalid, nor was she well. The right broad ligament was found to be divided into three folds: one carried the round ligament, one the tube, and the third the ovary. This latter extended nearly to the tip of the appendix, constituting the mesoappendix. Through this division of the ligament came the ovarian artery from some point high up behind the cecum. I did not feel justified in tracing it any farther. On the left side there was a mere rudimentary broad ligament low down, the round ligament, tube and ovary being entirely absent. The organs present on the right side were entirely normal. The question throughout the case had been one of diagnosis between appendicitis and salpingitis. The appendix and ligament were removed. The ovary was apparently normal and was not removed. The lower segments of the broad ligaments were thus perfectly relaxed and were not disturbed. The patient made a good recovery and is entirely free from pain.

Dr. H. P. Newman—My purpose in introducing this subject was to suggest to both surgeon and gynecologist more alertness in the handling of these cases. Appendicitis should not be regarded as a simple affection that may be neglected with impunity. I have seen fatal complications arise from its presence even forty years after the primary attack. If there is any pathology in the appendix, and if the patient's life would not be endangered by its removal, it should not be left in the abdomen after laparotomy. As I have stated, the pathology is not always discernible by the naked eye, and the macroscopic examination is not always conclusive, so that whenever the abdomen is opened a prophylactic appendectomy should be considered and its performance determined by the best judgment of the surgeon. Some one has asked in regard to the prevalence of appendicitis with infected ovarian cysts and twisted pedicle. I referred to this in my paper. It is not uncommon, and I insisted on the removal of infected cysts as I would the removal of infected tubes or any other infection of the pelvis.

THE DEVELOPMENT OF THE FUSION CENTER IN THE TREATMENT OF STRABISMUS.[*]

NELSON MILES BLACK, M.D.
MILWAUKEE, WIS.

The etiology of *strabismus* is a still much-mooted question, and each ophthalmic surgeon follows out a routine of *treatment* with his cases according to the theory which seems to him most rational. As the title *indicates*, defective development of the fusion center will be considered the essential etiologic factor in this paper, according to Worth's[1] theory.

De Schweinitz's[2] new book gives the following factors as causative:

1. Disturbance of the relation between accommodation and convergence by *errors of refraction.*
2. Disparity in the length, thickness and tension of opposing muscles.
3. Inequality in the vision of the two eyes or amblyopia of one eye, which removes the natural stimulus of diplopia to exact convergence.
4. Disturbances of innervation and defective development of the fusion faculty.

Savage[3] says, under the etiology of comitant esotropia: "*The conditions causing the* error exist from birth, and only one out of several natural causes undergoes any *change at any time* after birth. . . . That in the greater number of cases . . . over-stimulation of *the third* conjugate innervation center causes an actual deviation . . . a conversion of esophoria into an esotropia, and throws the immediate blame *for crossing* of the eyes on the ciliary muscles."

The following etiologic factors are also given in the order of their importance:

1. Esophoria.
2. Hyperopia.
3. Hyperphoria of one eye and cataphoria in the other.
4. A lower state of visual acuity in one eye than the other, either from congenital *abnormality in the perceptive*, transmitting, or receptive part of the apparatus or some opacity or *irregularity of the refractive media*, either congenital or the result of disease or anisometropia.
5. "The whole macula in one eye may be connected with *one* side of the brain, while the whole macula in the other eye may be connected with the other side of the brain."

And though Savage[3] remarks, "there is no test in the investigation of comitant esotropia so important as the fusion test," and lays so much stress on the training of the fusion faculty in its treatment and has determined the nine *conjugate innervation* centers of the extrinsic eye muscles, he does not come out and avow a fusion center.

"Vision[4] is the mental interpretation of an impulse conducted from the rods and cones of the retina through the optic nerve and tracts to the visual areas of the brain." Man being a binocular animal must, in his normal condition, receive two sets of sensations from any luminous object; these are transmitted to the visual areas of the brain; from there they must, in the normal state, be *transmitted* to a co-ordinating center, or, as I shall call it, the *fusion* center, where they are blended; here binocular vision becomes binocular single vision. In order to allow of a blending or *a fusing of these* two sets of sensations, *identically* corresponding portions of the retinæ of the two eyes must be influenced by the pencil of light; this requires binocular fixation.

To perform the normal function of seeing, then, we must have:

1. A normal perceptive apparatus, i. e., emmetropic eyes.
2. Perfectly balanced extrinsic muscles.
3. Normal transmitting apparatus.
4. Perfect *receptive apparatus*, and, finally,
5. A fully developed *fusion center.*

From this center must emanate all the efferent impulses to the various subsidiary centers for all changes in the accommodation, direction of the visual axes and positions of the head and body that are required to bring corresponding retinal points into focus; hence, when the development of this center, or its function after development, is in any way disturbed or *interfered with* we have as a result those deviations of the visual axes known as heterophoria and heterotropia, or strabismus; not due to abnormalities in the anatomic relations of the orbit and muscles and paralyses of the same.

Worth[1] has determined that the fusion center is fully developed in the normal individual by the sixth year.

The fusion center may be entirely *wanting; it* may be in a rudimentary state, due to non-use from various external causes or by being rudely *interfered with in its* developmental period by fright or some *prolonged or* severe illness.

Absence of the fusion center is evidenced in those not rare cases of *true alternating* strabismus, which, even after all methods of treatment have been tried, can *never obtain* binocular single vision, and some not even binocular vision. Though the visual axes may appear perfectly parallel, the vision in each eye normal or made so with correction, they can never fuse, but rapidly fix, first with one eye then the other.

The following conditions interfere with the development of the fusion center:

1. Refractive errors.
2. Inequality *in the sight of the two eyes.*
3. Faulty *perceptive, transmitting* or receptive apparatus.
4. Abnormal relations between orbit and muscles, their over-or-under-development and paralysis of one or more of them.

Refractive errors interfere with the development of the fusion faculty by the unequal relation between accommodation and convergence; the function of each separately has some latitude of movement, but there is a limit beyond which *neither can operate alone;* "thus a hyperope of 6 D. would require an accommodation of 6 D. *to neutralize it*, the visual lines being parallel, the *point of convergence* is then nearer than the point *accommodated for.*"[2] The images carried to the brain from both eyes being blurred, that of one is disregarded by the fusion center as a clearer image is thus obtained, exactly "as[5] we disregard the image formed by its fellow when we use the microscope with both eyes open," and the eye thus left without a point of fixation turns in, that being its direction in attempting to keep up the relationship between accommodation and convergence;

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[*] Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

[1] Worth: The Etiology and Treatment of Convergent Squint, The Lancet, May 11, 1901.

[2] De Schweinitz: Diseases of the Eye, fourth edition.

[3] Savage: Ophthalmic Myology.

[4] Suter, Posey-Wright: *Diseases of the Eye, Nose, Throat and Ear.*

[5] Black, Nelson M.: A Plea for the Early Treatment of Squint, The Journal A. M. A., May 24, 1902.

this is the beginning esophoria which eventuates into continuous esotropia. In myopia, in contrast to this, when deviation does occur, it is usually divergent strabismus.

Because the sensation sent by the eye to the fusion center can not compete in distinctness with that sent by the fellow eye, in anisometropia (even if slight), congenital amblyopia, opacities of the media or faulty conductive and receptive apparatus of one eye, it is disregarded, the center develops without its influence and the eye, receiving no return impulse, has no point to fix, and, consequently, the visual axes deviate; if, however, the center has been developed before these factors appear, habit usually holds the visual axes straight afterward.

Wood[6] says of amblyopia ex anopsia: "Whatever be the origin of the defect in sight, it is probably the main cause of the heterophoria." In my opinion, amblyopia ex anopsia is not a cause of the non-development of the fusion center, but, on the contrary, a result largely of its non-development. Because of the disregard of the sensation sent by the eye to the fusion center, it does not fix, is not used; and becomes amblyopic, the amblyopia generally does not correspond to any ophthalmoscopic defect, although the visual field is frequently contracted, the error of refraction of the amblyopic eye is often much the same as that of the fixing eye, so that the ametropia can not account for the lowered visual acuity."

Anatomic abnormalities of the orbit and extrinsic muscles or paralysis of one or more of them, of course, prevent the development of the fusion center because of the impossibility of binocular fixation, but nature may try to help out the fusion center in bringing about binocular single vision, even here, by specializing other cells to form a new fovea.

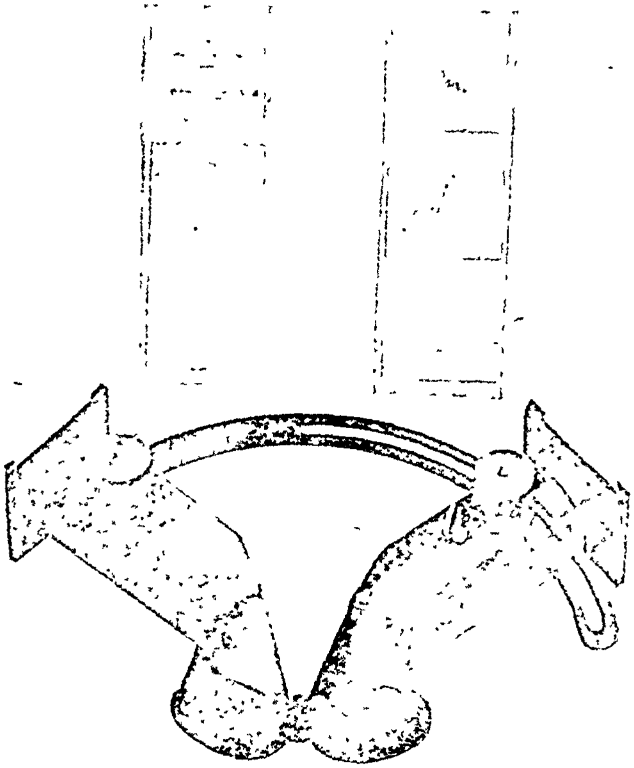
Those cases of strabismus which are due to the fusion center being interfered with during the developmental stage, usually give a history of a deviation following some severe illness, convulsions, or during an attack of whooping cough, or after a severe fright; it is usually periodical at first and finally becomes constant. The eyes are usually found emmetropic or nearly so, the separate muscular movements are perfect, fixation with either eye; but only the lowest grade of binocular vision exists, or perhaps none at all. The illness or fright has interfered with the development of the fusion center for the time being and a deviation, periodic at first, appears and may remain so, not being in evidence unless the child is ill, tired or excited; or it may become constant, each visual area remaining intact and a comitant, alternating strabismus results. These cases usually respond readily to orthoptic treatment.

Development of the fusion center by orthoptic exercise is by no means a new feature in the treatment of strabismus, but many of the various forms of stereoscopes, used for this purpose, have been faulty in that binocular vision could not be obtained. Sufficient time and patience in many cases were lacking; and an amblyopic eye was not considered worth working with when a tenotomy, advancement, or combination of the two, would produce, at least, a cosmetic result at once. Landolt[7] says: "The principle of any stereoscope useful for the treatment of strabismus is that the instrument employed places the eyes in the conditions which are most favorable to the fusion of their retinal images."

Worth's new stereoscope, or amblyoscope as he calls it, has overcome the first stumbling block.

"This instrument consists of two halves joined by a hinge, each half is made up of a very short tube joined to a longer one at an angle of 120 degrees; a mirror being placed at the cord subtending the arc of this angle; an object glass is placed at the free end of the longer tube, at the free end of the shorter tube is a lens, the focal length of which equals the distance of the reflected image of the object glass at the end of the longer tube. The two halves of the instrument can be brought together to suit a convergence of the visual axes up to 60 degrees, or separated to suit a divergence of as much as 30 degrees."

The writer has added to Worth's model an additional movement in a vertical direction, in order to obtain fusion when the lateral deviation is complicated by a vertical deviation.



Amblyoscope and Series of Slides.—The bird and cage being used to establish binocular vision only. The second set requiring true fusion to complete the picture. The last when fused gives an impression of the perspective.

With this instrument, the fusion center can be exercised and developed during the existence of the squint. The fact that parents are bringing their children for treatment for strabismus at an earlier age and demanding that something be tried before an operation is resorted to, makes us take more time and use more patience; and, finally, the fact that the vision of a large majority of amblyopic eyes can be improved by proper treatment has replaced immediate and indiscriminate operating and given this department of surgery its proper place, that of producing parallelism of the visual axes after the fusion center has been sufficiently restored, to maintain binocular single vision by the use of the stereoscope and no noticeable diminution in the degree of deviation from a continuance of the treatment.

The existing conditions in a case of strabismus naturally determine the method of procedure in attempting to develop the fusion center. The first thing, however, is to determine the visual acuity of each eye. This may be accomplished in children under 3 or 4 years of age after Worth's[1] method by means of five marbles or ivory balls, varying in diameter from one-half to one and one-half inches; if at five or six meters' distance the youngster with one eye occluded can go directly to the smallest ball thrown on the floor by the operator, it is safe to say his visual acuity is practically normal; at least, the vision of the two eyes can be compared in this manner and the question of an amblyopic eye determined. The amount of deviation of the strabismus is then determined in order to see as the treatment progresses if there is any diminution in its degree; this is accomplished with the perimeter or some of the various strabometers, or it is quickly demonstrated by the writer's[8] modification of Worth's apparatus, which is an easy and different application of the perimeter method. The ability of the various extrinsic muscles to rotate the eye is tested individually to determine whether the strabismus is the result of their over- or under-development, innervation or anatomic abnormality.

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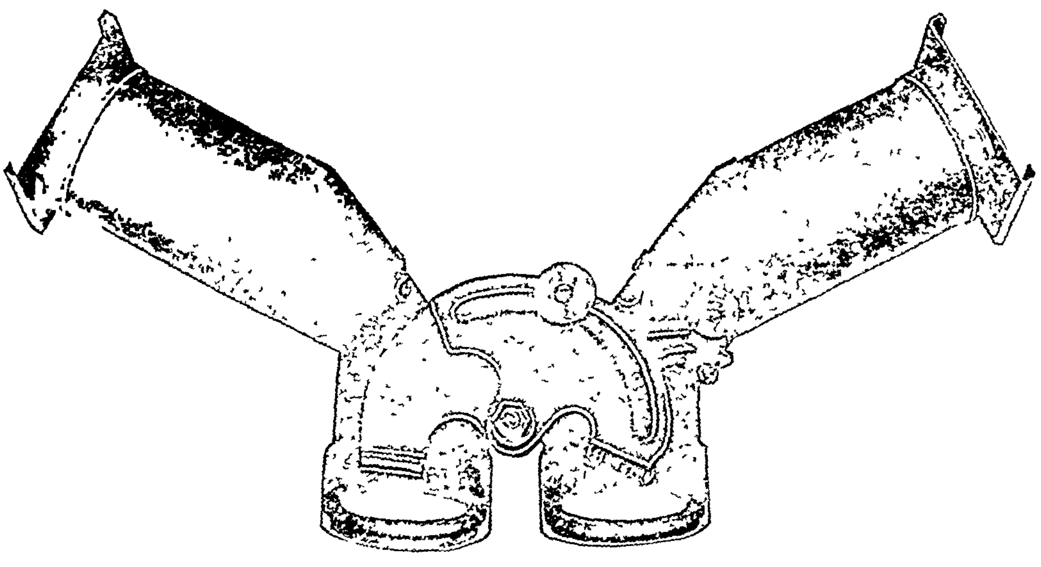
[6] Wood, C. A., Posey-Wright: Diseases of the Eye, Nose, Throat and Ear.

[7] Landolt: Norris Oliver Text-Book.

The next step is to determine whether binocular vision exists; this may be accomplished many ways, but with greatest ease, especially in children, by the use of the amblyoscope. The eyes are then subjected to complete cycloplegia; the errors of refraction, if any, determined and correcting glasses ordered.



Worth-Black amblyoscope, having vertical movement.

When an amblyopic eye exists, it is actively brought into use to determine whether its vision can be improved; this is done by instilling a mydriatic into the better member, if that is sufficient to allow the vision of the poorer eye to compete with it; if not, the better eye is occluded by a blinder or a bandage and the amblyopic eye is depended on for vision entirely. That a large majority of so-called amblyopic eyes can be improved in vision by requiring the possessor to depend entirely on them for seeing, is certainly proven by reported cases;[9] [10] in those cases in which no improvement is noted, if a visual field can be obtained, defects not visible with the ophthalmoscope may be determined, which will lead one to classify the eye as congenitally amblyopic; improvement in the vision of such an eye is almost beyond hope, still we should not give up trying until sufficient time has elapsed, with the better eye occluded, as to absolutely prove that there has been no gain in the vision of the amblyopic eye.

The development and exercise of the fusion center with the amblyoscope is commenced immediately; for this purpose three sets of object slides are used; the first are two dissimilar objects, as a bird and a cage, a mouse and a trap, etc.; these require only binocular vision. A set requiring binocular single vision or fusion has part of the subject on each slide, and must be fused to make a complete picture; the third set consists of stereoscopic pictures, which, when combined, give an impression of perspective or depth perception.

The amblyoscope is used in the following manner: "The child with his correction on is held on the surgeon's knees and the amblyoscope roughly adapted to his degree of deviation; it is then held before the child's eyes and an electric lamp is put in the axis of each tube about four feet away. By a simple mechanical arrangement each lamp is easily brought nearer to, or put farther away from, the tube which it illuminates. A slide showing a cage, for instance, is put in the tube before the child's fixing eye, and a bird in that before the squinting eye, and the child is told what to look for. At first he sees only the cage. The lamp before the fixing eye is then taken farther away and that before the squinting eye is brought nearer until the child sees the bird. By this time he has lost sight of the cage. The intensities of the illuminations are then adjusted until the child sees both the bird and the cage. The child is then allowed to grasp the instrument and, assisted by the hands of the surgeon, is taught to vary the angle of the instrument so as to make the bird go in and out of the cage. Many other similar pairs of slides are shown. The average child of 3½ or 4 years of age takes a very keen interest in the game, which he imagines has been devised merely for his amusement. Slides which require a true blending of the images are then shown. After a time it is often found that the angle of the instrument may be altered to a very considerable extent, either in convergence or divergence, while the eyes follow the objects and maintain fusion of the pictures. One often gets a powerful "desire" for binocular vision in these young subjects with surprising facility. The next step is to equalize the intensities of the lights. This may usually be done at this stage without a return of suppression. In many cases one is able to deviate the two halves of the amblyoscope more and more at each visit until parallelism of the visual axes is obtained."

As the visual axes are brought nearer parallelism, the use of an ordinary stereoscope with the Kroll's charts, Würdemann's modification of these or those recently published by Dr. Hale of Chicago, will serve as the most practical method of exercising the fusion faculty, as they can be used with an inexpensive stereoscope for daily exercise by the patient at home.

Some cases, however, will undoubtedly require operation to bring about complete parallelism of the visual axes; but, if the desire for fusion has been established—and Worth[1] asserts it can only be acquired in early childhood—it is only necessary to bring the visual axes approximately straight, because a desire for fusion, which has been acquired by the use of the amblyoscope, will then place and hold the eyes in such position that identically corresponding portions of the two retinæ are affected.

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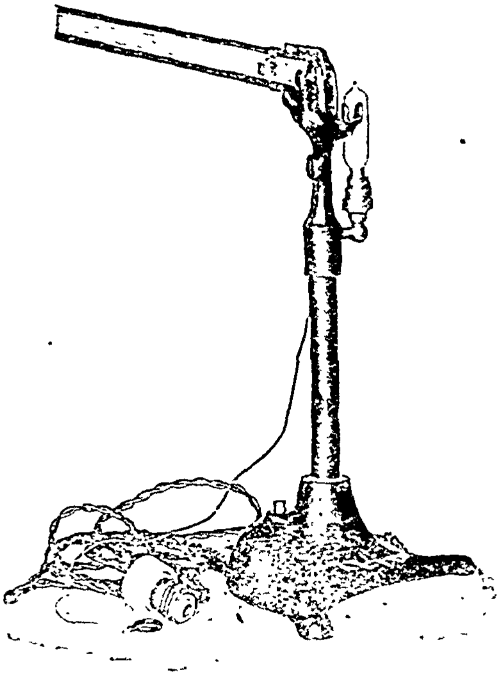
[8] Black, Nelson M.: A Simple and Effective Method of Determining the Degree of Deviation in Squint, Ophthal Record, November, 1902.

[9] Friedenwald: Improvement of Vision in Amblyopia from Non use. Ophthal. Record, January, 1903.

[10] Lewis: The Conservation of Binocular Single Vision, Annals Ophthalmology, January, 1903; Medicine, Nov., 1902

Until the etiology of strabismus is settled and universally accepted, the methods of treatment will vary with the etiologic theory accepted by the individual; however, since commencing with the above outlined treatment in February of last year, we have not operated on a case of strabismus in a child under 10 years of age, and there are now 17 cases under treatment, and all making progress, with five cases completely cured and maintaining binocular single vision without any discomfort. The objections to the method are the time required to effect the result and the possibility of having to resort to operative measures in the end; this with the assurance, however, of binocular single vision being maintained and no relapse of the condition; the trouble of impressing the parents with the importance of coming at the time indicated for consultation and the expense of the treatment, which amounts to as much or more than an operation, and in case of an amblyopic eye, of keeping the better eye occluded for sufficient length of time to obtain a result, are the main obstacles to overcome; these objections, however, I consider of minor importance when compared with the truly remarkable results obtained.



Worth-Black deviometer for determining degree of deviation in squint.

Hydrogen Dioxid in Diagnosis of Ulcer of Stomach.—A Russian confrère is cited by a French exchange as having been able to differentiate ulcer from cancer by the intense pains that followed ingestion of a tablespoonful of a 3 per cent. solution of hydrogen dioxid. This extreme sensitiveness of the gastric mucosa to the effects of a weak solution of hydrogen dioxid seems to be an invariable accompaniment of gastric ulcer, as treatment based on this assumption always resulted in a cure in his experience. He found also that the same solution had a marked beneficial effect in cases of gastritis, arresting vomiting and disinfecting the digestive tract. He thinks it might prove particularly useful in infantile gastro-intestinal affections. The results of treatment by this means of habitual constipation from atony of the intestines have also been very encouraging.

STEREOSCOPIC EXERCISES.

WITH A SERIES OF PICTURES—TO BE USED IN AMBLYOPIA AND SQUINT.*

ALBERT B. HALE, M.D.
CHICAGO.

The stereoscope has had a history not unlike many other instruments of our day. At first developed to illustrate certain scientific phenomena, it rested as an optical apparatus in the physicist's laboratory till the enterprising spirit of commerce combined its principles with the rapidly popularized art of photography and made of the product a scientific toy. Any one of mature years can remember the time when the center ornament of the parlor table was the stereoscope and its pile of pictures—from the Alps to the acrobat—and much instruction, as well as entertainment, was afforded by the fascinating contrivance.

I dare say that many a time some one person would be puzzled to find that the stereoscope gave him no better view of the pictures than did his naked eyes, but the explanation for this—the failure of the apparatus to develop the perception of depth, which is its function—was unknown to him or his friends, nor investigated by the unscientific; it was probably attributed to some idiosyncrasy, and no more thought given to it. Gradually the popularity of the instrument waned, and to-day in many an attic or lumber-room may be found a forgotten stereoscope, with its pictures, of which the modern child knows neither the use nor meaning.

Hitherto the stereoscope had served to illustrate only a phenomenon in physical optics, and the human eye which interprets it, i. e., what we call physiologic optics, was scarcely taken into account. But when ophthalmologists began to study the problems of the human eye (vision, binocular vision, fusion, depth perception) it was not long before there was a demand for some means to test the visual sense of the two eyes working together, so that the perceptive capability of each eye could be estimated both by itself and by association with its fellow. The principle of fusion was then investigated—a cerebral function not an optical condition—and the stereoscope was seized on as the instrument most adapted for the purpose.

Dubois-Raymond, a physiologist, early saw the advantages of the stereoscope, but Javal, and later Landolt, both ophthalmologists, were the first to popularize its scientific and practical application.

I shall not explain the principles of the instrument more than to say that it is necessary to separate—isolate completely—the image of one eye from that of the other, so that it is impossible for the observer to confuse what he sees with one eye with what he sees with the other, or whether he sees with the right or the left eye. By preventing this confusion, we at once notice a distinction that is not enough emphasized by physiologists in teaching the functions of the eye. The distinction is this: One eye may see while the other does not (I do not mean amblyopia, for this is a condition to be considered later and apart), monocular vision. The eyes may each perceive a portion of the outer world and combine these portions into an image, binocular vision. The eyes may each see these portions with a true estimation, not only of their relation to each other, but also of their special relation to the observer, and thereby fuse them into a single image with the perception of depth, binocular single vision.

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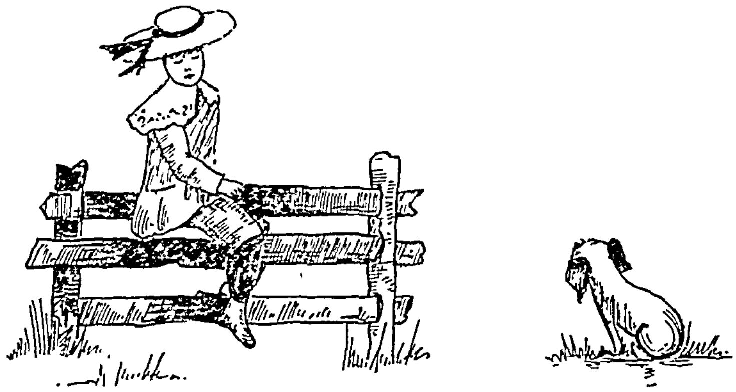
* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

Now, with a complicated apparatus and with elaborately devised charts and diagrams, it is possible to study retinal and cerebral function with pleasing exactness, and to make records of results, but the therapeutic use of the stereoscope is often hampered by such complications, because it requires the technical hand to manage them and the skilled ophthalmologist to interpret them, and because the patient is apt to become so confused at the details of the test that it is found impossible to make interesting exercises of them or to perform them at home without this skilful guidance. Exercises to be placed before the eyes of a patient arouse his curiosity; they must be such that a child may pursue them of himself and may be easily taught just what he is expected to accomplish.

European practitioners have published series of stereoscopic views which meet the best requirements of science and art, and I do not criticise them when considered as laboratory, or even office, apparatus. The French series of Hegg (Berne), used by Landolt; the German series of Dahlfeld, Kroll (Perlia), with its American reprint by Würdemann, Pflugk, the Spanish series of Presas, are all excellent in their way, but from my own experience I am convinced that they find but limited use when given to the patient for exercises at home. Beside this, they are all (with the exception of the American reprint) published in a foreign tongue, and all have pictures strange to the American eye, or so uneasy of interpretation that the patient is often more embarrassed to give a name to what he sees than to tell simply what the picture presents to him.



Figures on a sample card of stereoscopic exercises. In use there should be 60 cm. between the centers of the two images.

Such being the case, I felt that I might benefit my own patients by publishing a series of American pictures, simplifying them as much as possible for domestic use, reserving for office tests the more complicated problems in the higher developed series; but I can not be satisfied till I have submitted them to the judgment of my confrères, who, I hope, will aid me with their criticisms to make them a more suitable and usable set for the treatment of some amblyopias and squints. I am not so enthusiastic as to believe that squint can of itself be corrected or in many cases even improved by stereoscopic exercises alone; the classical treatment, by correction of the refractive error, and when deemed necessary by operation, can not be displaced by this means; but, on the other hand, I must express my satisfaction with the results of stereoscopic exercises; and my experience runs counter to that of Gould, who miscredits the efficacy of the stereoscope in amblyopias or squints.

Stereoscopic exercises must illustrate five stages:

1. Simple tests to measure what the one eye or both eyes together can do. This I have embodied in Series A (1, 2, 3, etc.), which can be extended as far as may be desired.

2. Simple tests of the ability of each eye to see its own field and to retain this impression while the other eye also sees. This is Series B, which grows somewhat more difficult from number to number.

3. Tests in which each eye sees what it at first takes to be the same picture, but in which the half for each eye lacks some detail present in the half for the other eye; these halves are probably fused, or the patient thinks they are, but a failure to fuse can be detected by the omission from the patient's description of one or more details. This is Series C.

4. Tests in which not only is there an instinctive stimulus to fusion, but also the added factor of depth, for the figures are so arranged that each eye obtains a picture presented to it at an angle differing from the angle of the other eye, and the completed picture seen with both eyes acting together should be that of a solid body, i. e., there should be a perception of depth in addition to fusion; stereoscopy, the perfected act of binocular single vision. This is Series D.

5. Tests by means of pictures of what we habitually see in the outer world, in which I have introduced two ordinary photographs from life and a simple catch card for reading, in which each eye is deprived of some letters visible to the other eye, so that both eyes must be used together and simultaneously before the story can be fluently read. This is Series E.

These charts may be placed in the hands of any child or adult, to be used at home and frequently, with regular reports to the ophthalmologist of what progress has been made. The pictures are scientific, clear, readily understood, handy and cheap. Any simple stereoscope of the shops may be used. The whole value of stereoscopic exercise depends on repetition, as it is only by this continuously repeated stimulation that the habit of fusion may be formed and perpetuated.

103 State Street.

DISCUSSION

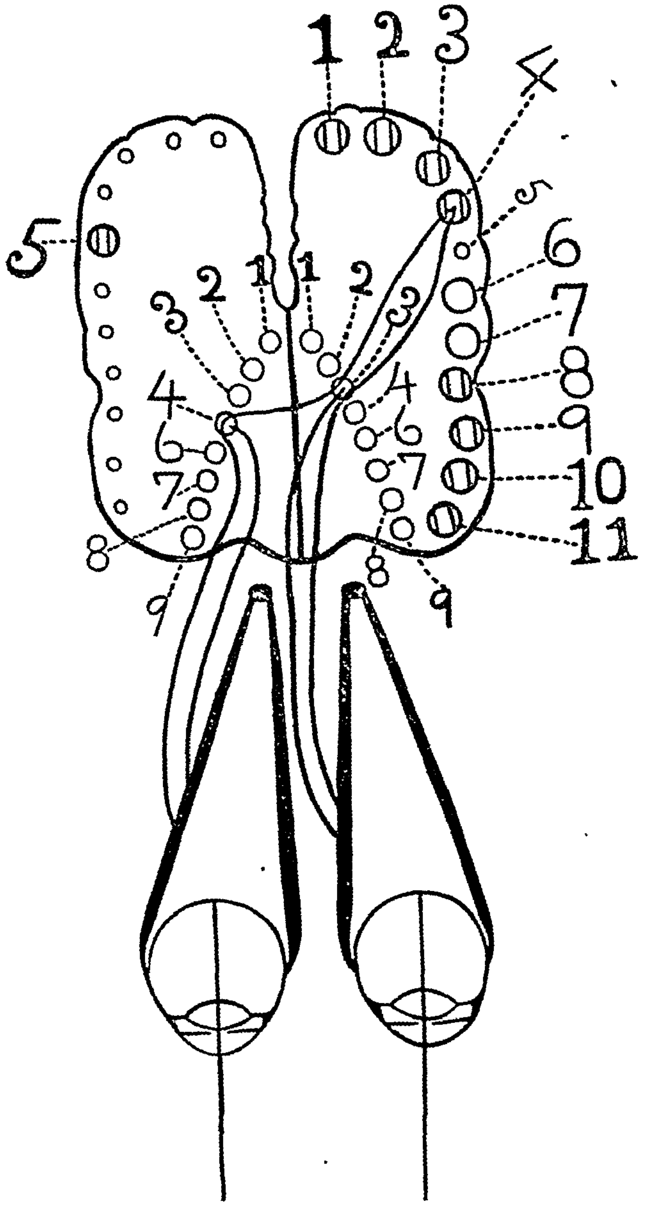
ON PAPERS OF DRS. BLACK AND HALE.

Dr. C. C. Savage, Nashville, Tenn.—I would call your attention to this chart, which is one made to illustrate my own paper, but which serves well to discuss this one. Dr. Black quoted me correctly when he said that I did not avow the existence of a fusion center. I deny the existence of a fusion center in the sense in which he uses the term, and I believe Dr. Black will agree with me before I am through.

I have represented here all the centers of the brain that have to do with the movements of the eye. Two faculties preside over these. One of the faculties is volition and the other is the fusion faculty. Nature has two ways of dealing with diplopia: One is the mental fusion of the two images and the other is mental suppression of one image. Both are mental faculties. I want to say that instead of having one fusion center, we have twelve at the base of the brain and two in the cortex.

I have these centers marked off here so as to indicate which are under the control of the fusion and which the volitional faculty. The ones crossed with parallel lines are volitional; the others, not so crossed, are under the control of the fusion faculty. The volitional centers are all in the cortex, while those under the control of the fusion faculty are situated mainly in the base, there being only two of these in the cortex. The basal centers are all fusion centers. Every one of them is presided over by the fusion faculty of the mind. There are just a few of these centers concerned in the condition that Dr. Black has spoken of—esotropia. The third basal center on either side has nothing to do so far as esotropia is concerned. The fourth center has a good deal to do with the condition before esotropia occurs.

When, in esophoria, the fusion faculty gives up its control over the right and left fourth basal centers, at that moment internal squint occurs, but so long as it has full power over these centers there can be no esotropia. Whenever these centers at the base of the brain have been overworked, then the fusion power of the mind gives way and internal squint occurs. Referring to one of the causative agents mentioned in Dr. Black's paper, as leading up to internal squint, I would say that center 10 in the cortex controls the focusing muscles of the eyes. The convergent center is the one marked 3, and it is connected by means of nerve fibers with both the internal recti muscles. When it sends out its impulses the resultant action is on the part of the interni only. Cortical center 10, which gives power to the two ciliary muscles, is so related to cortical center 3 that when one is in over-action the other must also be in a state of over-excitation. This explains to my mind why it is that hyperopia is one of the causes of internal squint. In hyperopia the images would be bad if the focusing muscles were not kept in a state of action. But, as sure as center 10 is excited, so is center 3 reflexly excited. Hence it is that when you have hyperopia there is pseudo-esophoria. There is always esophoria whenever there is hyperopia; it may not show itself as esophoria, but it is there. How is it, then, that in correcting the error of hyperopia we can cure squint in young children? Simply this: when the proper lenses have been given, center 10 becomes as quiet as can be so far as distant vision is concerned, and from this time on it has only to do the normal work required of emmetropic eyes. Now, whenever over-action on the part of center 10 is eliminated so is over-excitation of center 3 eliminated, and thus the pseudo-esophoria is cured. But, pseudo-esophoria is not the only cause of squint. The esophoria itself may not have been able to produce squint, but the pseudo-esophoria grafted on it gives the combined power necessary to bring about that condition. If you eliminate the pseudo-esophoria you bring the two externi muscles under control of the right and left fourth basal centers, and esotropia is no more.



I endorse all of the paper, except that wherein the author speaks of a fusion center. I say there is a fusion faculty and that it presides over twelve fusion centers at the base of the brain, and two fusion centers in the cortex.

Dr. Black's improvement of the Worth amblyoscope makes it an ideal instrument.

Dr. Casey A. Wood, Chicago—In my investigations of the subject I agree with Dr. Savage. Apart from the considerations presented by Spencer and others in the study of the psychology of the matter I think binocular single vision is a thing that every child learns for himself. He does not have it when he is born, but acquires it. It is an effort of the intellectual faculties. He has to reason out the matter. In the first months of infantile life he makes efforts of the nature of which he is probably dimly conscious. Use is made of the radiations from the calcarine fissure which extend to the neurons in the upper cerebrum. After awhile he acquires the faculty of fusion and binocular single vision by means of the basal centers is possible.

I think a matter of great importance is the use of the Worth instrument. I think it is by all odds the best instrument we have for the exercise of binocular fixation in children, and I am sure you will agree with me that the instrument devised by Dr. Black furnishes the best means we have for that end. I have used the original Worth instrument since it was first accessible. The thing of principal importance in the Black modification is the vertical displacement of the two tubes to allow of exercise in the presence of hypertropias and cyclotropias, which are not properly provided for in the original instrument.

Speaking of Dr. Hale's paper, I must confess that the great array of cards for the stereoscope demands more patience than I possess. I am reduced to practically three pictures, which the child can not fail to recognize, and these I have so far found sufficient for all the exercise required. He will, for example, always recognize the picture of a bird with one eye and a cage with the other, and this particular card I almost always use. Indeed, I do not believe children are esepcially amused with a great variety of cards; their interest may be sustained with the same old "bird and cage." Let me suggest that an assistant watch the child all the time; few young children can be trusted to use with profit and alone any instrument of this sort. The exercises should be carried out at least three times a week in the office and the improvement noted. At home it is desirable to have a good stereoscope that will enable the child to be exercised three or four times a day under the care of the nurse or mother. In my experience the best stereopticon card is a very simple one. I use two figures made like this (illustrating on board) a square and a sphere.

Finally, as Worth points out, the fusion faculty can not usually be developed in children over 6 years of age. We should, then, begin our lessons as early as possible. In most cases the evolutionary course pursued by the squinting child, as shown by the amblyoscope and stereoscope, is, first, simultaneous (double) vision; second, binocular vision; third, binocular-single, or stereoscopic vision. Even when the eyes appear straight the squinter may never pass the first stage of vision.

Dr. Edward Jackson, Denver—One measure that has not been mentioned is the use of the fusion tubes suggested by Priestley Smith. The tubes have each at the further end, away from the eye, simply a dot and a line, and these being fused give two dots and one line. It is even possible to work on cyclophoria by simply twisting the tubes. I find that the child will keep this up as long as any exercise that I have ever tried; certainly longer than any of the pictures. The light can be regulated for the better eye by pasting a little piece of paper over the slit in the tube. They give the very best binocular exercise: to recognize something with both eyes at the same time and to get primary fusion.

Dr. M. D. Stevenson, Akron, Ohio—I have been using the Worth amblyoscope for two years, and find it of real service in the treatment of squint when used sufficiently early, properly and persistently. The instrument as modified by Dr. Black, if it can be made sufficiently firm, should be especially serviceable where hypertropia is also present.

I think the term fusion faculty is preferable to that of fusion center, and believe it to be the principal factor in the production of binocular vision, although I also believe it is presided over by another faculty, which I prefer to name the conscious faculty of vision, rather than the volitional center.

Usually the first thing in the treatment of these cases is to establish conscious vision if possible in each eye, that is, we try to teach the child to see with each eye at the same time, or, in other words, try to produce diplopia, e. g., the bird within the cage, and when we have succeeded in doing this we have progressed a long way toward a cure. This may be spoken of as the establishment of conscious vision in each eye—the training of the conscious faculty of vision—and until this can be accomplished in a case there can be no training of a fusion faculty or center, because there would be as yet nothing to fuse, their being but one recognized image Two images must be seen—the conscious faculty of vision in each eye must be trained—before there can be any fusion If the vision of one eye is unconscious, that is, if it has not risen into consciousness, there can be no tendency to combine the unconscious vision of that eye with the conscious vision of the other. Before fusion can take place the vision in both eyes must be conscious at the same time. Quite a large number of people do not have conscious vision in both eyes at the same time; in them it takes training to produce either diplopia or double combined (binocular) vision.

Dr. Nelson M. Black, Milwaukee—A mistake was probably made in attempting to go into the etiology of strabismus in this paper, but it was thought necessary in order to have some reason for carrying out the line of treatment mentioned However, the name "fusion faculty," given by Dr. Savage, is as acceptable as "fusion center"; whatever it may be called neither adds to nor detracts from the universal good results obtained in treating strabismus by this method. I thank Dr Savage for the easy manner in which he has let me down.

Dr Albert B. Hale, Chicago—I want to call Dr. Savage's attention to the fact that the fusion faculty can often be controlled by the will so that they are not antagonistic or complementary, but one may at times be supportive of the other.

I did not mean these cards to be competitive with the Worth instrument. They are only a set of cards that the patient can take home for daily exercise, and that is what we want I have had good results from simple stereoscopic pictures.

A DEVIATION FROM THE USUAL METHODS OF CLOSING ABDOMINAL WOUNDS, INCLUDING HERNIA.*

O. O. WITHERBEE, M.D.
Surgeon to Los Angeles County Hospital.
LOS ANGELES, CAL.

A troublesome experience with buried sutures has defeated the best efforts of many excellent surgeons in their endeavor to separately approximate the different layers in closing abdominal wounds.

With a desire to overcome this difficulty, and yet to accomplish all that may be done with buried sutures, I began about two years ago the exclusive use of silkworm gut in closing, not alone abdominal wounds, but in suturing all incisions I have had occasion to make in doing a general line of surgery.

In closing an abdominal wound in the medium line it is my habit to first approximate the peritoneum with a silkworm gut introduced in the same manner as a subcuticular suture, and then to bring both ends through the integument near the extremities of the incision. This permits of its ready removal any time from the third to the sixth day, according to the pleasure of the operator.

The abdominal fascia is now brought into apposition by ordinary figure-of-eight sutures, except that the ends instead of being brought out near the margins of the wound, are carried by long curved Hagedorn needles through the adipose tissue to emerge on a line parallel with the abdominal incision and from one and one-half to two inches on either side of it.

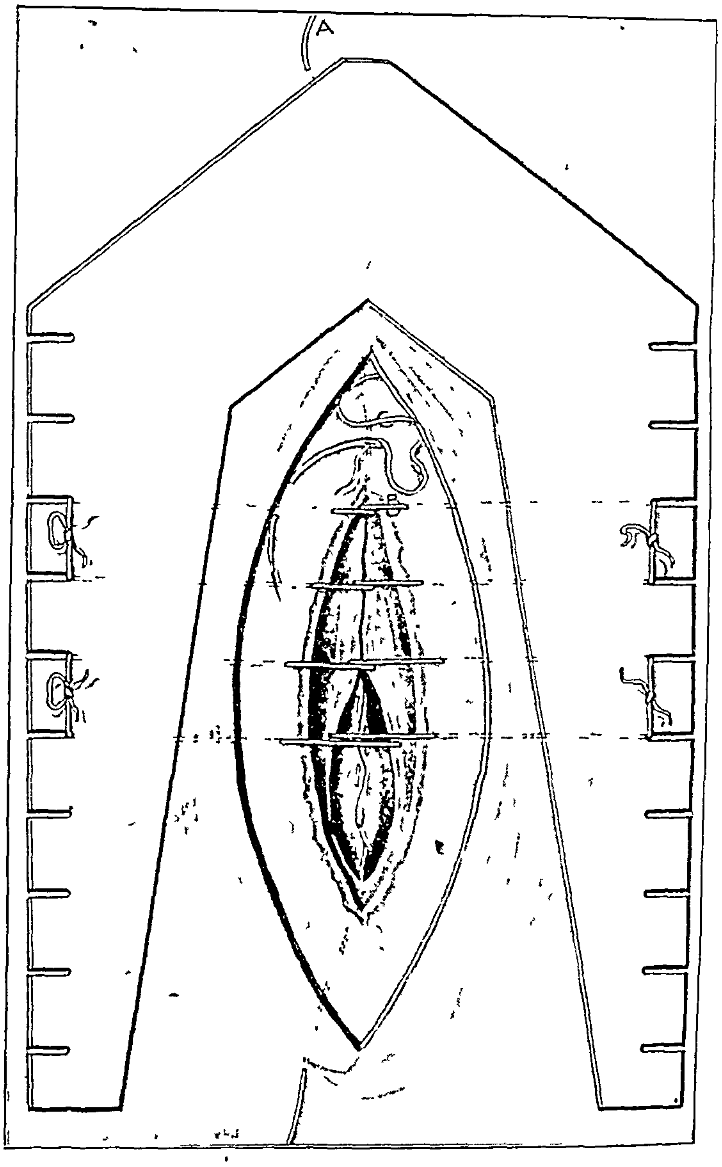


Fig 1—The U-shaped aluminum plate employed in closing abdominal wounds A The peritoneal suture, which should emerge near extremity of wound instead of above the plate B The figure of eight suture, which is supported by the plate C. The subcuticular suture

These ends are passed through notches in the lateral bars of a U-shaped or rectangular framework, made from aluminum or hard rubber, the outer dimensions of which measure from three to four inches in width, and from four to six inches in length. The sutures are then tied in pairs on each side respectively, with just sufficient tension to perfectly approximate the fascia. On one side the ends should be tied in a bowknot, that the tension may be altered if necessary.

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* Demonstrated before the Southern California Medical Society, and read before the Los Angeles County Medical Society.

The skin incision is next closed by a subcuticular suture, and when completed strips of sterile gauze are drawn beneath the plate and a moist bichlorid dressing placed over all. The same tactics are made use of in the treatment of hernia, except that the peritoneal suture is quilted back and forth through the neck of the sack, and its ends carried well above the internal ring, where they are brought through the tissues and secured to the upper part of the framework, said suture to be removed at the end of one week.

In approximating the conjoined tendon with Poupart's ligament, the tension should be exerted on a plane to correspond with the resistance to be overcome.

The above-named structures do not normally lie in apposition, but are often widely separated, hence the difficulty in effecting and maintaining their approximation until union is complete. The ordinary figure-of-eight sutures brought out near the margins of the wound will utterly fail in a large percentage of cases, especially if the skin alone is relied on to withstand the resistance.

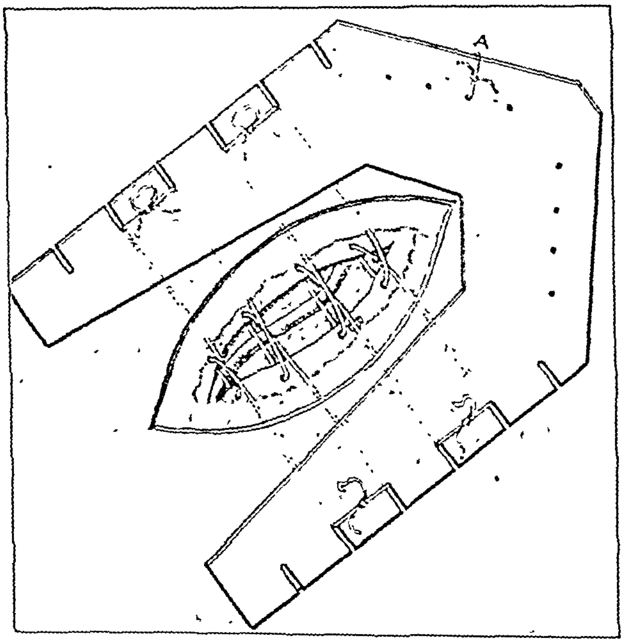

Fig. 2.—Represents the U-shaped aluminum plate employed in approximating the conjoined tendon with Poupart's ligament. A The peritoneal suture, which fixes neck of sac above internal ring

By bringing the sutures out at a remote distance from the incision and securing them to the framework above the skin, we accomplish all that can be done with a buried suture, while the tissues are subjected to much less abuse than when a knot is employed at point of approximation, thereby creating a fixed, unyielding band, which materially interferes with the circulation, and does certainly lessen the strength of union between those ligaments. Another advantage of this method in the treatment of hernia lies particularly in the fact that the tension of the sutures can be altered at any time the swelling or congestion of the parts may demand it.

In abdominal work the comfort secured to the patient by relieving the skin of that pressure necessary to maintain approximation of the deeper structures is frequently a factor of no small importance. Little does the surgeon think when placing his sutures that their position may have much to do with the welfare, and even the recovery, of the patient. Since endeavoring to eliminate that pressure occasioned by the closing sutures, I have noticed that my patients exhibit less evidence of shock, and that it is not an uncommon thing for one to sleep almost the entire night following an abdominal section.

Most of the creatures subjected to this torment are women, who, it is said, were born to suffer, and therefore uncomplainingly endure for long hours a slow torture which they fancy belongs to the operation, and so must be borne.

It is true they do not speak especially of the stitches, for the reason that they can not differentiate varieties of pain coming from the same region, but appreciate it all as a sum total, and bear it, as there is nothing else to do.

In abdominal cases the sutures may be removed from the eighth to the tenth day, but in hernia cases, to insure certainty of union, the sutures should not be removed before the twelfth or fourteenth day.

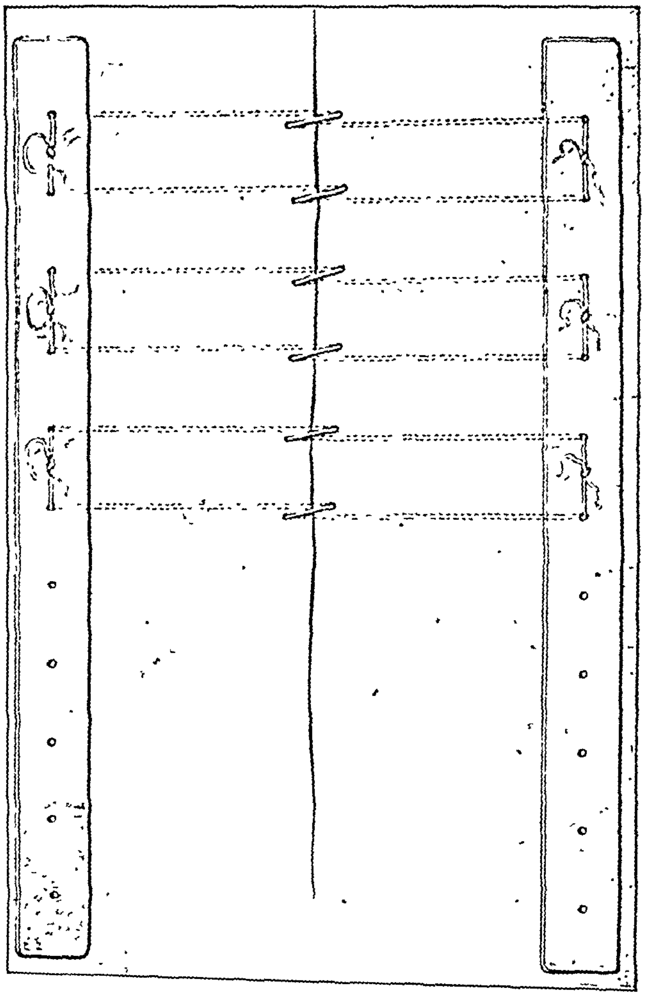

Fig. 3.—Represents the use of separate plates for increasing the pressure area in plastic work.

In plastic work when it becomes necessary to draw the skin over denuded areas of considerable size, the same manner of closing may be employed without fear of sloughing as a result of pressure from the sutures. Here we simply invert the small loop of the figure-eight, in which case it acts as an interrupted coaptation stitch, minus the knot, and may or may not appear above the surface of the skin. In order that it may also serve as a retention suture at point of emergence beneath the plate only lateral perforated bars should in this instance be employed.

Again, when closing short incisions where there is a scant amount of adipose tissue the plates may occupy a position near the margins of the incision, in which case the transverse support may be omitted.

In abdominal work before making the initial incision, the lateral boundaries of the framework should be outlined on the integument by a delicate scratch made with the point of a scalpel.

In closing, the sutures emerge at this line (which has now become visible from congestion) and when tied on both sides produce sufficient fullness of the intervening integument to prevent tension at the line of incision. No adhesive strips are necessary for abdominal support, and the binder may be applied only moderately snug.

The cosmetic effect is all that could be desired, as the cicatrix remaining after removal of the subcuticular suture is seldom more than a delicate white line.

The stitch holes beneath the plates close up and disappear.

The time consumed in adjusting the plates does not prolong the operation, and with a little practice is quite as convenient as the old way.

610 Frost Building.

SCARLET FEVER.*

WILLIAM L. BAUM, M.D.
Professor of Skin and Venereal Diseases, Post-Graduate Medical School of Chicago; Attending Physician on Contagious and Infectious Diseases, Cook County Hospital; Dermatologist, the Chicago and German Hospitals.
CHICAGO.

During the years 1896 to 1903 the following cases of scarlet fever were under my observation at the Cook County Hospital:

Number of cases, 628; males, 307; females, 321; deaths, 44.

Complications.—Suppurative otitis, 11; nephritis, 47; pneumonia, 19; arthritis, 2.

Mixed Infections.—Number of cases, 142; deaths, 17; diphtheria, 96; measles, 29; diphtheria and measles, 1; varicella, 13; parotitis, 3.

It will be seen from the above table that the mortality was a little over 7.07 per cent. of all the cases treated. In the mixed infections the mortality was 11.9 per cent. It will be noted that among the complications, suppurative otitis media occurred eleven times, or in 1.7+ per cent. of all cases. In about 35 per cent. of the cases there was pain in the ear. The mild or catarrhal form of otitis media, according to Bader and Guinon,[1] is very common, occurring in 33 per cent. of the cases.

Holt[2] has found it in 75 per cent. of those cases accompanied with severe throat symptoms.

Nephritis, in which there were present albumin, casts and blood cells, occurred in 47 cases, or in 7.6+ per. cent. of all cases. Albumin was present in over 37 per cent. of the cases during the early stages of the disease.

In three cases there was present at the beginning, or on the second day of the eruption, a severe septic nephritis, with much albumin and many casts. These cases were all fatal.

Acute lobar pneumonia was present in 19 cases, mostly involving the upper lobes. Henoch[3] states: "The mucous membrane of the bronchi and the parenchyma of the lungs are excited by inflammatory influences far more frequently than we usually suppose. Not only catarrh, but more or less extensive bronchopneumonia occurs in the first and second weeks of the disease. These conditions are frequently overlooked, however, because a whole series of synchronous severe typhoidal symptoms disguise them and divert the attention of the physician." We found bronchitis and bronchopneumonia in nearly all severe cases.

Severe arthritis was present in two cases; in one of these cases, a girl 10 years of age, the swelling of both elbow and wrist joints appeared on the tenth day of the disease. It was ushered in by a chill, rise of temperature to 104 degrees and great tenderness in the joints. The symptoms increased in severity up to the twenty-eighth day of the disease; the joints became soft and fluctuating, the aspirated fluid was filled with streptococci and the child finally died of a general sepsis. There was also present nephritis.

In 21 other cases there was slight swelling of the joints, but unaccompanied by any other severe symptoms.

Among the mixed infections, diphtheria was the most common. Cultures are made from the throats of all patients admitted to the contagious and infectious ward of the Cook County Hospital. In the 628 cases of scarlet fever, the Klebs-Löffler bacillus was found 96 times, or in 15.2 per cent. of all cases. It is well, however, to state that in many cases it appeared as a purely secondary infection during the period of early convalescence and after exposure. Jürgensen[4] answers some points in regard to diphtheria complicating scarlet fever as follows: (1) Is any one able, by simply inspecting the genuine diphtheritic membrane, to differentiate it from the membranes that occur in a scarlatina that is not complicated by diphtheria? In many cases, yes. In diphtheria these are firm, compact membranes of a grayish yellow color, that can be separated in their entirety. In scarlatina the membranes are softer, looser, separable only in portions and of a more brownish color. To this I can not agree, for in many of the cases of the latter type the Klebs-Löffler bacillus was found, and not only this, but from these cases others were infected with diphtheria. (2) A deep destruction of the tissues in the vicinity of the parts primarily involved is more rare in diphtheria than in scarlatina. (3) Obstruction of the larynx by a membrane formation is a comparatively rare occurrence in scarlatina, and still more rare is a croupous exudate on the mucous membranes, extending deep down into the air passages. (4) I do not wish to lay too much stress on the fact that in the involvement of the larynx by a diphtheritic inflammation from the pharynx accompanying scarlatina, the clinical symptoms have a characteristic type. (5) The paralysis following genuine diphtheria is absent in the pharyngeal diphtheritis accompanying scarlatina. (6) As to the time required by the course of the disease, Henoch declares, in regard to the condition that he calls the necrotic inflammation typical of scarlatina, that it appears, as a rule, on the third or fourth day after the beginning of the disease; this holds good only for the cases that are moderately severe. In severe cases it may be present even in the course of the first twenty-four hours.

Corlett[5] states that among contagious and eruptive fevers none presents so many varied types as scarlet fever, ranging, as it does, from the mildest form, scarlatina simplex, or benigna, to the most malignant type, scarlatina maligna, called by the French foudroyante. Between these two extremes we find an almost endless variation from the normal, one shading gradually into the other; so that any sharp differentiation into groups is quite impossible. It is this constant variation in type which renders the differential diagnosis of scarlet fever from other disease processes so difficult.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. H. W. Stelwagon, W. L. Baum and J. A. Fordyce.

1. Moizard Traite des mal de l'Enfance, Paris, 1897.
2. Diseases of Infancy and Childhood, New York, 1897.
3. Vorlesungen über Kinderkrankheiten, p. 642, 3rd edition.
4. Nothnagel's Cyclopedia of Practical Medicine, volume on Diphtheria, Scarlet Fever and Measles, p. 505, 1902.
5. A Treatise on the Acute Infectious Exanthemata. 1902.

In differential diagnosis, drug eruptions, as caused by belladonna, quinin, copaiba, chloral, opium and the coal-tar derivatives, must be taken into consideration, for not only are the conditions for which they are prescribed accompanied by fever, but the drug eruptions frequently start on the face and locations characteristic also of the scarlet fever eruption. Toxic erythemata occur in the course of septic infections, which are frequently mistaken for scarlet fever eruptions. In both of the above conditions the enlargements of the glands in scarlet fever, as shown by Schamberg, are of diagnostic value. Cases of rubella, or German measles, are frequently mistaken for mild scarlet fever, and it is with great difficulty that the diagnosis is arrived at. In the scarlet fever the rash is made up of minute, brightly injected puncta, slightly elevated and closely studded together, forming a uniform or finely mottled surface, while the rash in rubella is always measly, and never becomes confluent.[5]

Other cases which had been sent into the hospital as scarlet fever proved to be erysipelas, cerebrospinal meningitis, measles, tonsillitis with erythema, influenza and one case of septic typhoid fever.

It is strange that where so many children who had recently undergone surgical operations were exposed to the infection that only in two instances did scarlet fever develop among them. Hoffa[6] believed that scarlatina can originate from wounds, and quotes Von Leube, who infected himself during an autopsy on the cadaver of a case that had died of an unusually severe attack of scarlet fever.

ETIOLOGY.

Since the report of Klein,[7] in which he was convinced that the Marylebone epidemic of scarlet fever in London could be traced to the milk supply, and found the streptococcus taken from the vesicles on the udders of cows, which he believed were suffering from true bovine scarlatina, there have been many others, notably Fiessinger,[8] who believe that they have discovered the true etiologic factor. Class[9] describes a diplococcus. His organism is a non-capsulated diplococcus appearing occasionally, though rarely, in streptococcic form. It is polymorphous in character, attaining not uncommonly, under certain conditions, an unusual size. It is said to be constantly present in the pharynx in the scarlatinal angina. Baginsky and Sommerfeld[10] have described a streptodiplococcus very similar to the one described by Class. We have endeavored to follow out this work, especially on the lines laid down by Class, but have found so many similar organisms in the throats of patients, suffering from the infectious diseases, that the results are inconclusive.

Weaver[11] made many cultures from the throats of scarlet fever patients and reaches the following conclusions:

1. The bacteria obtained in cultures from the skin, epidermic scabs, and the surface of the tonsil, are the same as those found in the same locations in health, and no one of them is constantly present, except the streptococcus in the throat.

2. Because of the numerous cocci which grow in such cultures and which appear in groups of two and four, or bunches of the same, under the microscope, it is impossible to identify them except by a complete study in pure cultures.

3. Cultures made by inexperienced persons, or by those who do not fully appreciate the importance of avoiding the tongue, are especially apt to contain large diplococci or sarcinæ.

4. The streptococcus is present on the tonsil of scarlatinal patients in enormous numbers in almost all patients.

Hektoen,[12] in a series of bacteriologic examinations of the blood, during life, in scarlet fever, with special reference to streptococcemia, comes to the following conclusions:

1. That streptococci may be found in the blood of cases of scarlet fever that run a short, mild and uncomplicated clinical course.

2. That streptococci occur with relatively greater frequency in the more severe and protracted cases of scarlet fever in which there also may develop local complications and clinical signs of general infection, such as joint inflammation, but even in the grave cases of this kind spontaneous recovery may take place, and, finally,

3. That streptococcemia may not be demonstrable in fatal cases of scarlet fever.

The theory that scarlet fever is a streptococcus disease does not seem to receive any direct support from this work.

After a study of the literature bearing on the subject of the bacteriology of scarlet fever and an endeavor to verify the works of the investigators, one is forced to the conclusion that it has not yet been shown that any one of these organisms is the true etiologic factor in scarlet fever.

DISCUSSION.

Dr. Jay F. Schamberg, Philadelphia—I regret that Dr. Baum was not able to read that part of his paper on the clinical description of scarlet fever. The differential diagnoses between scarlatina and certain scarlatiniform erythemata is frequently involved in great difficulty. In some cases it is utterly impossible to be sure whether one is dealing with a scarlatinoid rash or the true eruption of scarlet fever. The exanthem of scarlet fever may be regarded as a toxic erythema or dermatitis; there are other substances besides the scarlatinal poison which are capable of producing a similar eruption. Quinin, belladonna, antipyrin, opium, mercury and other drugs may produce rashes which may closely simulate the scarlet fever exanthem. Erythemata occurring in certain infectious diseases and septic states may be quite indistinguishable from that observed in scarlet fever.

Differentiation would be easy if all cases of scarlatina were frank and well pronounced. It is a facile matter to recognize as scarlet fever an attack characterized by sudden rise of temperature to 104 F., vomiting, inflamed throat, a diffuse punctated rash, strawberry tongue, general glandular enlargement, with the subsequent development of otitis media, nephritis, rheumatism or albuminuria. It is an easy matter to set down on paper a differentiation between typical examples of scarlet fever and scarlatiniform erythema, but such information often fails one at the bedside.

There are mild cases of scarlet fever in which the fever is insignificant, and the throat symptoms no more pronounced.

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[6] Specille Diagnose der innern Krankheiten, Bd. ii, Leipzig, 1893.

[7] Report of Local Government Board of London, 1885.

[8] La Semaine Medicale, July, 1893.

[9] New York Medical Record, September, 1899, and The Journal A. M. A., vol. xxxiv, No. 34, 1900.

[10] Berliner Klin. Woch., No. 22, 1900.

[11] Transactions of the Chicago Pathological Society, February, 1903.

[12] The Journal A. M. A., March 14, 1903.

Indeed, in atypical cases the disease may exist without fever, without *angina*, or even without a rash.

The history of the case is often of importance in clearing up the diagnosis. If the attack can be shown to have resulted from an antecedent case, or if it give rise to a subsequent infection, the diagnosis is at once simplified. The appearance of the tongue carries considerable diagnostic weight—not so much the coated tongue with red papillæ peeping through, but the red, *papillated* tongue which is seen about the third day of the disease—the so-called strawberry tongue. It is uncommon to find such an appearance of the tongue in scarlatiniform erythema.

Too much importance has been attached to the occurrence of desquamation. Scaling after a scarlatinoid rash has been regarded as confirmatory evidence of the scarlatinal nature of the disease. Dermatologists recognize the fact that desquamation will follow any scarlatiniform erythema which has been characterized by sufficient inflammatory change in the skin. Indeed, these erythemata often scale much more profusely than the rash of scarlet fever. More important than the mere existence of scarlatinal scaling is its persistence. It is not rare to see a comparatively mild attack of scarlet fever in which the desquamation may persist for five, six or seven weeks. A point of diagnostic value in the desquamation of scarlet fever is a tendency of the epidermis to split just beneath the free border of the nail (*Subungual cleavage*), the epidermis then peeling off down the finger and exposing the pinkish, tender skin beneath. This usually occurs from about the tenth to the fourteenth day.

Scarlatiniform erythema may usually be distinguished by a lesser grade of constitutional disturbance, the eruption being disproportionately pronounced as compared with the fever and prostration. The throat may be reddened, but the tonsils are not swollen and covered with exudate. The red papillated tongue is usually absent. Enlargement of the maxillary gland is not present. Furthermore, there is often a history of recurrent attacks of these erythemata. Many reported cases of repeated attacks of scarlet fever have doubtless been instances of erythema scarlatiniforme recurrens.

There is no acute infectious disease which is more often attended with diagnostic difficulty than scarlet fever. Poorly-marked cases are frequently overlooked, and other counterfeiting rashes are often diagnosed as scarlet fever.

Dr. A. W. Brayton, Indianapolis—Did Dr. Baum say anything about the scarlet fever they had along the lake shore 35 or 40 miles north of Chicago during the last winter in Evanston and Lake Forest? I had some patients from Lake Forest who said the place was quarantined. They stated that there were no deaths and that there was a good deal of difference of opinion as to whether it was scarlet fever. The disease in Indianapolis has been of a mild type for the last ten years. Very few deaths have occurred, not more, in proportion, than from measles.

Dr. Henry G. Anthony, Chicago—In answer to Dr. Brayton I wish to state that I had an opportunity of seeing some of these cases, and there is no question that they were typical scarlet fever, and they were not all mild.

Dr. Ludwig Weiss, New York—I would ask Dr. Baum whether in those cases which proved to be clinically light there has been noticed a rash in and below the inguinal folds, below Poupart's ligament, and having a burnished aspect. I have seen this symptom several times, and my attention was drawn to it, especially in a case where after an operation for adenoids the child developed a rash which looked like scarlet fever, but where a diagnosis could not be made at once. Of course it might have been caused by traumatism, as eruptions sometimes occur after operations, but it developed later that it was true scarlet fever. If those who see so many cases would notice this symptom, it would help a great deal toward making an early diagnosis.

Dr. J. B. Kessler, Iowa City, Iowa—I am sorry the author did not go into the clinical aspect more particularly, because it is important; at times it is difficult to make a diagnosis of scarlet fever. I know a medical man who graduated and located in Dubuque, Iowa, years ago, who showed an eruption to some of his colleagues. They were in doubt as to the trouble, but agreed among themselves that as he was a young man they would shut him up anyway, so they told him he had scarlet fever. I have been acquainted with him for seven years and have seen him in his operating room with this eruption, which shows a mild grade of erythema scarlatiniform. The throat will be slightly reddened, and there will be slight malaise for three or four days before this comes out and while the eruption remains. This is followed by mild desquamation. This has been repeated for twelve years.

In our city scarlet fever is pretty well "vaccinated" out. I do not remember of a death in the city for twenty years, but strange as it may seem, in the adjoining towns I have seen severe cases. Last summer I attended a severe case of scarlet fever in a little girl where the glands of the neck became involved and suppurated.

In regard to the spreading of scarlet fever, I think that is largely due to neglect in not having the cases properly inspected before quarantine has been removed. I remember some years ago there was a question of diagnosis in a case of scarlet fever. The mother said that her son had had scarlet fever, and our health officer was in doubt about the case. I told him I thought he had scarlet fever, but as the health officer had let him out I would like to have him drop in occasionally so that I could watch the desquamation. I watched the desquamation for thirty days, and at the expiration of that period, to get rid of it, he sandpapered the soles of his feet. This was indicative to me that there is a chance to spread scarlet fever beyond the ordinary quarantine of thirty days.

Dr. William L. Baum, Chicago—I regret that it was not possible to present this paper in full, and I thank Dr. Schamberg for calling attention to the clinical side of the case. Experience demonstrates that the diagnosis is often made with considerable difficulty. It has occurred in the hospital that the typical symptoms seemed to be absent, and patients have been transferred on account of the early disappearance of symptoms.

Dr. Brayton's question in regard to the Evanston epidemic was answered by Dr. Anthony. A number of severe cases coming from that district were transferred to our service, but I do not remember that there was a single death. However, I am glad the gentleman called attention to the mortality. It is rather interesting that in these hospital cases, which are largely drawn from the other wards of the hospital, the children's ward and from districts where you would expect illy-nourished children, the mortality is less than 7.7 per cent. Included in these mortality statistics are those brought to the hospital in a moribund condition, and who died within six hours of their admission.

Dr. Weiss calls attention to an eruption in the inguinal folds below Poupart's ligament. This I have not seen. It is a symptom to which I am glad to have my attention called, as I have not found it in any of our cases. We see many cases of scarlatiniform erythemas, and I believe most of the surgical scarlet fever is of this type. It is an interesting fact that in the children's surgical ward during a period of nine years, where at times as many as thirty or forty are exposed, only two cases of scarlet fever have developed.

Regarding the period of isolation, we isolate a patient at least forty days whenever possible and find that that period is sometimes not long enough. I am convinced that the statement made by many clinicians that the incubation period is not infectious is a mistake. We have had a number of cases where the exposure could only have occurred in the pre-eruptive stage.

Under Water Five Minutes.—To settle a dispute, George Kistler, swimming instructor at the University of Pennsylvania, recently remained under water five minutes and five seconds. It is stated that an examination by a physician following the feat showed no departure from the normal except some acceleration of the heart's action.—*Medical News.*

Special Article.

THE PURIFICATION OF WATER SUPPLIES BY SLOW SAND FILTRATION.

(Continued from page 853.)

II.

WATER FILTRATION IN THE UNITED STATES.

The first sand filter constructed in the United States was the one built in 1872 under the direction of Mr. J. P. Kirkwood at Poughkeepsie, N. Y. A similar filter was installed by the same engineer at Hudson, N. Y., in 1874. Both these plants are still in operation. Although a beginning in water purification in this country was made at this early date, a more decisive step was taken by the construction of a sand filter at Lawrence, Mass., in 1893. The establishment of this filter may be said to mark the opening of the modern era in water purification in America. One of the leading American authorities on water supply has said:

> The Lawrence filter was in a large sense the beginning of water purification in America. This is particularly true when the matter is considered from a hygienic standpoint. A few filter plants had been built in America before the Lawrence filter, but these earlier plants had been directed largely or principally toward improving the physical character of the water. At Lawrence, for the first time, a filter was constructed with the deliberate purpose of reducing the death rate. The success that was achieved in accomplishing this result attracted the attention of the whole country and was of the greatest service in directing attention and energy to a most important subject, which up to that time had not received the attention which it deserved.

Another distinguished engineer has said:

> It is difficult to estimate readily how great has been the benefit which this filter has produced outside of the city of Lawrence. It has proved a stimulus and an example for many later developments in this field, and it has served as a basis of reference for engineers and sanitarians, not only in this country, but also in Europe. No matter how many filters may be built in years to come which are larger in capacity or more efficient or more economical in operation, it is very doubtful if any will succeed in displacing the Lawrence filter from the classical position which it now securely holds as marking the beginning of a new epoch, and, in fact, the first epoch of important practical accomplishments in this country in water purification.

A. THE LAWRENCE FILTER.

The city of Lawrence is situated in the northeastern part of the state of Massachusetts, near the New Hampshire boundary line. According to the U. S. census of 1900, its population was 62,559. The city lies on the Merrimac river, a stream which affords water power for various manufacturing interests, and from which since 1876 the public water supply has been derived. The present population on the watershed of the Merrimac above Lawrence is estimated as about 480,000, nearly 318,000 of which is urban population and therefore constitutes an important source of pollution. It was calculated that in 1900 the proportion of sewage flowing in the stream past Lawrence amounted to one gallon in every 200 at periods of average flow, and one gallon in every forty in the driest periods. The most dangerous element of pollution is the crude sewage discharged from the city of Lowell, eight miles above Lawrence. Like Lawrence, the city of Lowell has until recent years obtained its water supply from the Merrimac river and has in consequence suffered severely from typhoid fever, and the fact has been noted on several occasions that an increase of typhoid fever in Lowell has been followed in due course by an increase in the disease at Lawrence. Prior to the introduction of a pure water supply the typhoid fever death rate in both Lowell and Lawrence had for years been excessive, and averaged as high as from three to four times the typhoid fever rate in the state at large. It was primarily to remedy this serious condition that the construction of the Lawrence filter was undertaken in the fall of 1892 at the instigation of Mr. Mills, an eminent engineer and public-spirited citizen of Lawrence, and pushed to completion by September 20 of the following year.

The filter is located a short distance above the city of Lawrence on the north bank of the Merrimac river. Its total available filtering surface is about two and one-third acres. Until recently the filter bed has been maintained as a single unit, and, as will be seen, the lack of subdivision of the filtering area has greatly embarrassed the general operation of the plant.

The quality of the Merrimac river water does not present any special difficulties. The water does not usually contain a large amount of suspended matter, and the silt carried at times of flood is relatively coarse and is of a kind that settles out rapidly. The number of bacteria in the river water is not as high as in many other polluted river waters in the United States, ranging, as a rule, about 5,000 to 10,000.

During the ten years that the Lawrence filter has been in operation, a number of instructive incidents have occurred in connection with it which have emphasized certain of the fundamental tenets of sand filtration and have developed new points for future warning and guidance. At the time the filter was originally built it was intended that it should be operated intermittently, it being at that time supposed by Mr. Mills that purification would be more effective if the air were admitted to the sand at frequent intervals, as in fact is known to be the case in sand filtration of sewage. Certain exigencies of operation, however, due primarily to the amount of water demanded by the city, soon led to the abandonment of the system of intermittent operation and the maintenance of practically continuous filtration. Entirely favorable results have been secured by the continuous method, and the superior yield of water when the filter is operated continuously renders improbable a return to the original method.

Many of the most harassing circumstances in the operation of the Lawrence filter have been due to the lack of a cover. During the winter months the proper scraping of the filter surface has been greatly hampered by the frequently recurring necessity for removing a layer of snow and ice. The diminution in the yield of the filter, the marked interference with the bacterial efficiency and the exorbitant expense of dealing properly with the frozen surface are factors that have seriously impaired the efficiency of operation. The cost of removing the ice has sometimes amounted in a single winter to over $3,000, or more than one-third of the total cost of maintenance. Those in charge of the Lawrence plant have often urged on the city authorities the economy of covering the filter, but for reasons easily understood by those conversant with American municipal conditions, an annual outlay for labor is more attractive to the average city council than an expenditure for interest charges.

The original cost of the Lawrence filter was surprisingly low, amounting to only about $66,000, but the enforced economy practiced in certain directions at the outset has not been justified by several occurrences in the history of the filter. Perhaps the most notable instance of this sort is the trouble that has been occasioned by the lack of a watertight bottom to the filter. The absence of this protection has at times allowed ground water to enter, carrying with it a certain amount of iron in solution. The presence of iron is known to favor the growth of a microscopic fungus, *Crenothrix* by name, an organism which by its accumulation in pipes and underdrains, has given rise to much trouble in the waterworks of Berlin, Rotterdam and other places. At Lawrence the underdrains of the filter became gradually clogged with a heavy filamentous growth of *Crenothrix,* and finally the passage of water was impeded to such an extent that it became necessary to reconstruct the drainage system. The processes of repair inevitably led to considerable disturbance of the filtering surface, and was promptly followed by a decrease in the bacterial efficiency of the filter, and a little later by an increased number of cases of and deaths from typhoid fever. Many other similar experiences in connection with the operation of European filter works have shown that a very slight disturbance in the operation of the filter may affect profoundly the health of the community supplied with the water. The municipal parsimony at Lawrence which failed to provide watertight filter basins must be held directly responsible for the loss of human life.[3]

Mention has already been made of the great difficulty experienced in cleaning the Lawrence filter, due to the construction of the filter plant as a single bed instead of in sections. The latter arrangement would have greatly facilitated operation and lessened the cost of maintenance by making it possible to clean properly one section of the filter while the supply was being kept up by the remainder. A belated subdivision of the filtering area was carried out in 1901, when two transverse division walls were constructed dividing the filter bed into three sections of about equal area.

BACTERIAL EFFICIENCY.

From the outset the effluent of the Lawrence filter has been regularly examined with a view to determining the bacterial efficiency of operation. The following table shows the reduction in the number of bacteria attained by passing the river water through the filter.

TABLE 1.

AVERAGE NUMBER OF BACTERIA PER CUBIC CENTIMETER.

Year.	In Water Applied to Filter.	In Water Drawn at Tap at City Hall.
1894	10,800	110
1895	11,100	80
1896	7,600	85
1897	10,900	84
1898	4,400	66
1899	5,800	42
1900	8,970	49
1901	3,017	26

Examination of the detailed figures[4] brings to light the interesting fact that in the latter part of 1898 and the early part of 1899, when the already mentioned repairs of the underdrains were being undertaken, the number of bacteria in the tap water was from four to five times as great as during the rest of the year. This confirms the opinion already expressed concerning the connection between the disturbance of the filter and the unusual number of cases of typhoid fever that appeared in the city early in 1899.

A very interesting feature in the methods of water examination employed at Lawrence since the latter part of 1898 has been the application of the test for the presence of *B. coli communis.* The presence of organisms of this class, as is well known, is a more delicate and satisfactory indication of the existence of sewage pollution than the ordinary numerical determination of all colonies developing on a gelatin plate, and unquestionably affords a more exact criterion of the quality of the water. The management of the Lawrence filter seems to have been the first to apply this test to filter effluents. The method has been found so illuminating that it is doubtless destined to a wider extension as its value becomes more generally known. The disturbance in the working of the filter in the latter part of 1898 is betrayed in a very striking manner by the increase in number of colon bacilli appearing in the effluent water.

The final and decisive test of the efficacy of any system of filtration must always remain the condition of the typhoid fever death rate of the community supplied with the water. The following table exhibits the application of this test to the Lawrence filter.

TABLE 2.

REPORTED CASES OF TYPHOID FEVER AND THE DEATHS RESULTING THEREFROM IN LAWRENCE BEFORE AND AFTER THE INTRODUCTION OF A FILTERED WATER SUPPLY.

Year.	No. of Cases per 10,000 Pop'n.	No. of Deaths per 10,000 Pop'n.	Typhoid Fever Death Rate for State of Mass.
Six Years Prior to Construction.			
1887	33	11.7	4.5
1888	50	11.6	4.5
1889	51	12.8	4.1
1890	43	13.4	3.7
1891	45	11.9	3.6
1892	36	10.6	3.5
Average	43	12.0	4.0
Eight Years Following Construction.			
1894	18	4.8	3.1
1895	15	3.1	2.7
1896	8	1.9	2.8
1897	13	1.6	2.3
1898	15	1.4	2.5
1899	22	3.3	2.3
1900	21	3.2	2.2
1901	15	1.8	1.9
Average	16	2.6	2.5

Several complicating factors must prevent the drawing of any sweeping conclusions from the figures in this table. One of these is the continued use of canal water for drinking in several of the Lawrence mills, a practice that persists in spite of continued and emphatic warnings. A study of the cases of typhoid fever occurring in the city from year to year has shown that a considerable proportion of cases and deaths have appeared among persons known to have partaken of the polluted canal water. It is said that in 1894 twelve deaths out of the twenty-four recorded for that year were among the drinkers of canal water, and in 1895 nine out of sixteen. Deducting known infections from this source would give a much more favorable aspect to the work of the filter.

On the other hand, as tending to diminish the credit to be assigned to the filter for the lowering of the typhoid death rate, it has been pointed out that since the installation of the filter the city of Lowell, previously the main source of pollution of the Lawrence water supply, has introduced a pure ground water. As a result of this improved supply typhoid fever has diminished very greatly in Lowell. The improvement in the condition at Lowell indicates that, even had a filter not been introduced at Lawrence, a decline in the typhoid fever death rate would have occurred as a result of a decreased prevalence of this disease in Lowell.

For these reasons the benefits accruing from the introduction of the Lawrence filter do not stand forth as clearly as they might have done under some other conditions. In view, however, of the figures in Table 2, there is no escape from the conclusion that a remarkable decline in the typhoid fever death rate occurred immediately after the construction of the filter and has persisted up to the present time.

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[3] See increase in typhoid fever in 1899, Table 2.

[4] Thirtieth and Thirty-first Reports of State Board of Health of Massachusetts, 1898 and 1899.

Recapitulating some of the lessons gained from the experiences at Lawrence,[5] these are:

1. The importance of proper construction at the outset as obviating the necessity for repairs, and the consequent serious disturbance of the filtering process.
2. The desirability of subdividing the filtering area in a small or moderate-sized filter plant.
3. The necessity for covering the filters in cold climates.
4. The value of the test for the presence of *B. coli communis* in filter effluents.

(*To be continued.*)

Clinical Report.

A CASE OF CONGENITAL SACRAL TUMOR—SPINA BIFIDA.

E. VIKO, M.D.
SALT LAKE CITY.

Reading the report of a case in The Journal, July 25, 1903, by Dr. R. Henderson, leads me to relate a unique case in my experience:

July 4, 1898, I attended Mrs. C., aged 25, in her second confinement. Labor progressed rapidly and normally until the head and body down to about the navel protruded from the vulva, when there was a sudden check to the expulsion of the hips and lower extremities. On pulling gently the hips appeared to be firmly held by some obstruction in the uterus. My first thought was that I had possibly to deal with twins. The uterus seemed to be unusually full. As part of the body of the baby was in the vagina and the hips and lower extremities in the uterus, it was difficult to explore the genital canal, but some kind of tumor could be distinctly felt projecting from the sacrum of the infant. On making strong traction the hips and lower extremities were suddenly delivered with a gush of a large amount of liquid. The body, which lived about fifteen minutes, weighed about fourteen pounds.

On examination, it was found that the entire coccyx and sacrum were undeveloped. The skin over the sacral region was elongated in the form of a sac, extending to the knees of the infant. The anal orifice was located about two inches below the perineum in front of the tumor. On the lower part (summit of tumor) coursed large veins, which had weakened the skin at this place, where under the strong traction the skin broke. The baby was otherwise well formed and fat.

Keith Building.

New Instrument.

A NEW SURGICAL MALLET.

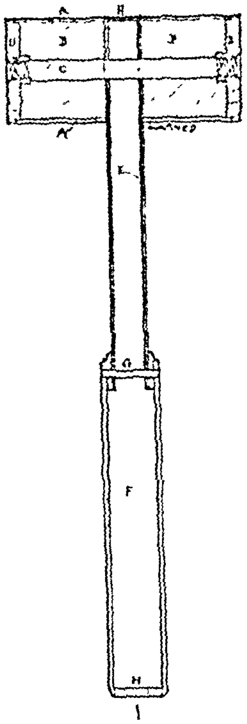
E. R. LARNED, M.D.
CHICAGO.

This instrument is made entirely of metal, presenting on all sides perfectly smooth surfaces, making it as easy to sterilize as any other surgical instrument.

The principal part of the mallet, the head, is made as follows: Two steel faces (D) 1⅜ inches in diameter and 3/16 inch thick, are turned in a lathe, leaving the center 5/16 inch thick and ⅝ inch in diameter, as shown in the sketch, which is full size. The shell of the head (A) is of seamless brass tubing and fits into little recessions in the steel faces. A block of pure aluminum is turned to exactly fit the inside of the shell. This filling (B) has a hole drilled through the center ¼ inch in diameter, through which runs a steel pin (C), the ends of which have right and left threads, the steel faces being screwed on this pin, after which the protruding ends are riveted flush with the steel faces.

The handle is made of seamless brass tubing, soldered and then held together at G with a small steel pin, which is riveted. The portion of the handle marked E is fitted into the hole drilled through the head to exactly admit it, before the steel pin (C) is put into place. In addition, the head (A) and the handle (E) are soldered at their connecting points. Two small plugs (H) close up the openings in the ends of the handle. The total length of the handle is 9 inches. The length of the head 3⅛ inches. The total weight of the mallet is 12 ounces.

The advantage this mallet possesses over others is proper size, being more nearly that of a small wooden carpenter's mallet which some surgeons have used because of its size. It is balanced properly. It has the right "hang" and "feel." The impact of the mallet on a chisel is not the dull, heavy blow that one gets from the copper mallet or the lead mallet. Then, again, it can be boiled and made perfectly sterile, which is not possible in mallets made of wood or with rawhide faces.



The mallet is efficient, two being in use in large hospitals in this city. One has been used in the largest surgical clinic for the last seven years, during which time it has served its purpose well.

Any instrument maker can manufacture the mallet by following the drawing, which is an exact reproduction of the midsection of the mallet, changing the dimensions to suit individual ideas.

5751 Prairie Avenue.

The Admission to Membership in County Societies of Those Who Have Been Sectarians.—The *Iowa Medical Journal* says: "There is a whole lot of sentiment being wasted regarding this matter. The object of this reorganization is to broaden the medical profession and encourage those who intentionally or accidentally have cast their lots along sectarian lines, to renounce such selection and join us in making the grand profession of medicine what it should be."

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[5] Much information regarding the Lawrence filter, its construction and operation has been obtained from the annual reports of the Massachusetts State Board of Health for 1893-1901, and also from a valuable paper by Knowles and Hyde (Transactions American Society of Civil Engineers, 46, 1901, No. 906), and the accompanying discussion of this paper by several experts.

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THE NOMENCLATURE OF TOXINS.

Bacterial and other toxins have proved to be of so complex a nature and subject to such alterations that a group of terms relating to them has developed. These terms are not devoid of confusion, owing to their multiplicity and similarity. The word toxin has come to have a limited and technical application. Ehrlich has concluded that it should be applied to those poisonous products of vegetable or animal metabolism by immunization with which one is able to obtain a specific antitoxin. Diphtheria and tetanus toxin, abrin, ricin, etc., are examples of the former, and snake poison of the latter. Toxins must also have a definite structure, that is to say, a haptophorous group by which they link themselves to cells and substances derived from cells, especially antitoxin, and a toxophorous group. This definition, then, excludes such poisonous substances as the vegetable alkaloids, as strychnin and morphin, and poisonous minerals, for which an antibody apparently can not be produced; these are toxic substances, but not toxins.

The bacterial toxins mentioned occur in solution in the cultures of the bacilli and may often be precipitated in an impure form by certain chemicals. It is to be noted that not all pathogenic bacteria secrete demonstrable poisons in culture media, although such organisms in disease may cause intense intoxication, a condition which we can not attempt to explain by the mere mechanical presence of the bacteria in the tissues. It may be that such organisms (typhoid, cholera) contain toxic substances which remain incorporated in the bacterial cells, and become effective only when the latter die or are dissolved. The term toxin has been applied, perhaps loosely, to cultures of the typhoid or cholera organisms which have been killed by heat. We have previously called attention to work showing that when autolysis of typhoid or dysentery bacilli is allowed to occur, a toxic substance goes into solution. The work, however, has not shown that these substances are toxins according to the conception mentioned above.

When Ehrlich undertook to establish a fixed method for estimating the value of diphtheria antitoxin he obtained confusing results, and was forced to make an analytic study of the toxin to clear up certain unexpected variations. For example, a toxin would gradually lose its virulence for the guinea-pig, but would constantly require the same amount of antitoxin to neutralize it. Naturally, it would be expected that as the toxin lost in virulence less antitoxin would be required to neutralize it. Again, a toxin of low virulence would sometimes require, relatively, more antitoxin for neutralization than one of higher virulence. It appeared that a toxin might lose in virulence but keep its original binding power for antitoxin. This indicated that toxin was far from a simple, uniform substance. Some of the phenomena seemed explainable by the assumption that the toxin molecule consists of two groups, one which has the combining power (haptophore) and another in which the toxic power resides (toxophore). This makes it possible to understand that the toxophore group might disintegrate, leaving the binding group still in condition to unite with antitoxin. This degenerated toxin has received the name toxoid, and is, on the whole, not poisonous, having lost its toxophore complex. But as the binding complex is retained it is still able to unite with antitoxin, and when injected into animals is able to unite with the cells and cause the production of antitoxin. In tetanus it is almost necessary to begin immunization with the toxoid or a weakened toxin. The discovery cleared many difficulties and suggested that careful analytic studies of a toxin should be made with the expectation of bringing to light other complexities. This Ehrlich did with the diphtheria toxin and found that he had to deal with a multiplicity of poisons in the same solution; as the toxin became older various degeneration products formed. He devised a method of expressing graphically the constitution of a toxin in the form of a "toxin spectrum," the evolution of which is very intricate. A grasp of the situation may, however, be obtained in the following statement: Having discovered the existence of toxoids, the degree of their affinity for antitoxin became of importance, in differentiating them from toxins. It was assumed that this affinity might be greater, equal to, or less than that of the toxin. For the determination of this a toxin was used which in a given quantity contained 100 toxin units (or fatal doses for the guinea-pig) and 100 toxoid units. The total binding power of the toxoids was then equal to that of the toxins, making a total of 200 binding units. These were completely neutralized, say, with 1 c.c., i. e., 200/200 c.c., of a standard antitoxin. When less than 200/200 c.c. of antitoxin was added some of the binding units of the toxin solution were unbound. It developed that the groups first set free were not toxic, i. e., they were toxoids, and a variety of toxoids which has a weaker affinity for antitoxin than toxin. If it were otherwise, some of the toxin would have been set free and a guinea-pig injected with the mixture would have died. These are the epitoxoids. As less and less antitoxin was added to the quantity of toxin mentioned nothing but epitoxoids was set free until the amount fell below 150/200 c.c.; then toxin began to be freed, and this continued in all mixtures until the quantity of 50/200 c.c. of antitoxin was reached. By this time all the 100 units of toxin had been freed, and 50 units of toxoids. Carrying the experiment further showed that the remaining binding groups were also toxoids, but since they were the last to be freed they had a stronger affinity for antitoxin than the toxin had, and hence they were protoxoids. Syntoxoids are toxoids equal to pure toxin in their affinity for antitoxin. The epitoxoids are also known as toxons, and are not without toxicity for the guinea-pig, as they are able to cause the paralysis characteristic of diphtheria without other symptoms.

When Madsen and Dreyer injected their mixtures into rabbits it was found that not only the toxins but also the toxons caused acute death. However, by adding what was an excess of antitoxin for guinea-pigs and injecting the mixture into rabbits paralysis, as the only symptom, could be produced. Ehrlich has called this portion of the toxin solution toxonoid—toxic for rabbits, but not for guinea-pigs. Hence toxin, toxon and toxonoid are three toxic constituents of a filtered culture of the diphtheria bacillus. By further refinements in experimentation it was found also that the toxin could be resolved into prototoxin, deuterotoxin and tritotoxin, the differentiation being based on differences in affinity for antitoxin, and that there were also an alpha and a beta modification of each of these, according to the readiness with which they became changed into toxoids.

The work of Madsen and Dreyer is hardly less important in this connection than that of Ehrlich, since they have so fully corroborated and extended his discoveries, especially in regard to diphtheria and tetanus toxin. It is difficult to appreciate the vast amount of painstaking labor which was required to reach the results so briefly expressed above. They seem highly technical and one may be inclined to think they concern only theorists, but it was the realization of these very technical results that led Ehrlich to formulate the side-chain theory of immunity—a theory which has already yielded practical consequences of enormous value. These considerations are of particular interest now in view of the polemic being waged by Gruber on Ehrlich's conception of the toxin structure and the side-chain theory—in fact, on Ehrlich's theories as a whole—a subject to which we may return later.

PROLONGED FREEZING AND GERM LIFE.

While it has been generally conceded for some years that the mere fact of freezing did not kill bacteria, but only rendered them for the time incapable of multiplication, there has been a very general impression that the keeping of bacteria at a temperature below the freezing point for a long period eventually led to their death. Such intensely low temperatures as may be produced by liquid air fail to destroy at least the more resistant forms of bacteria. On the other hand, Sedgwick, Winslow and Park in the course of their investigation of the ice supply of Boston came to the conclusion that ice, even from contaminated water, became sterile after a month or perhaps even less. In a review of their work in the *Boston Medical and Surgical Journal*[1] it is stated that it may be concluded from these investigations that ice more than three weeks old is sanitarily as safe as a well-filtered water supply. Cases of typhoid fever due to ice might naturally be expected to occur, if at all, at the time immediately following the cutting of infected ice. As this is done usually in January, the ice could hardly be held responsible after March, at the latest, for any trouble, even were it known to be infected. It is almost needless to say that this statement attracted wide attention. There had been more than a suspicion that virulent typhoid bacilli might outlive the winter, even though kept below the freezing point for several months. The epidemic of typhoid fever at Plymouth, Pa., which was traced to the stools of a typhoid patient thrown on the snow at least three months before the outbreak of the epidemic, seemed to show this very clearly.

Unfortunately for the peace of mind of those who have felt that ice could be used with impunity in the summer time because of this declaration of the Boston investigating committee, there is a report[2] of an epidemic of typhoid fever due evidently to impure ice which occurred at least nine months after the infected ice had been cut and stored. This epidemic developed at the St. Lawrence State Hospital, three miles below the city of Ogdensburgh, the first patients coming down with the disease on October 2 of last year.

The tracing of the typhoid fever to the ice as the cause of this epidemic seems to be unquestionable. The ice house from which the suspected material was obtained was first opened for use—none of the ice having been previously withdrawn—about a week before the first cases of typhoid developed. During the months of January and February, 1902, when this ice was forming, there were three or four cases of typhoid fever in Ogdensburgh among users of well water. The drinking water of the institution is above suspicion, from both the laboratory and the practical standpoints, since it is from a public water supply, and no cases of typhoid fever occurred among those using it in Ogdensburgh. An examination of the ice showed definite evidence of organic contamination in the form of the colon bacillus.

As the result of this confirmation of the suspicion that there was sewage material in the ice, further investigations were made in the laboratory of the St. Lawrence State Hospital itself, and five colonies of bacteria were found, presenting characteristics resembling the typhoid bacillus. Of these cultures three proved to be of the colon bacillus, one of a bacillus not identified, while the fifth was a pure culture of the typhoid bacillus, as shown by all the generally accepted bacteriologic tests. Under the microscope this bacillus proved to be actively motile with the morphologic appearances of the *Bacillus typhosus*.

There seems no reason to doubt, then, that the typhoid bacilli may live for many months, perhaps even indefinitely, in ice frozen at temperatures very near the zero point and kept under the favorable conditions that must exist for its constant preservation at temperatures well below the freezing point when properly stored as far north as Ogdensburgh.

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[1] Vol. cxlv, p. 557.

[2] Amer. Jour. Med. Sci., October, 1903, p. 680.

One fact, however, of the Ogdensburgh epidemic deserves noticing, since it indicates that this specific instance can not be taken as positive evidence of the general retention by ice of bacteriologic impurities. Water frees itself in the process of freezing by throwing down its organic contents and foreign matter, and not by enclosing them and freezing them to death. Occasionally, however, masses of foreign substance are entangled in the process of freezing, and become enclosed in the ice. Such was the case with the ice tested at Ogdensburgh, and from the black masses included in its substance the cultures were made. There was no doubt concentration of infection in these inclusions and the rest of the ice may have been comparatively innocuous, though that can not be proven. There is one fact, however, that stands out prominently, viz., mere cold alone does not destroy the germs; therefore, the peril from ice is not altogether an improbable one, especially when macroscopically visible impurities exist.

THE FALLIBILITY OF SCIENTIFIC DICTA.

If one looks about him in the scientific world for the most striking characteristic of our times, he will find it, perhaps, in the systematic organization of investigative work. There has never before been a time when original research has been so carefully planned or so consciously directed as now. The world is tremendously impressed with the results of science attained during the last two centuries, but it would not be surprising, with the immense system of inquiry now in vogue, if during the twentieth century discoveries were made which would exceed in number and eclipse in grandeur those of all the centuries which have preceded.

In the forward march of science, great theories are originated, have their day and are demolished. But it is surprising how often an old theory, thought to be thoroughly extinct, will be exhumed and resuscitated. Like Colonel Bogy of the golf links, a scientific bogy may be "downed" one day, but it is likely to "down" its antagonists the next. The science of chemistry began with alchemy—the attempt of the ancients to manufacture gold out of the baser metals. Gradually the doctrine of the immutability of the "elements" developed and the efforts of the alchemists were believed to be attempts at the absolutely impossible; one who harbored their hopes was regarded as ridiculous. But the physicists and chemists have been making some startling discoveries in the recent past, as the result of which the elements have been shown to be less "immutable" than was thought. Each of them gives off radiations of minute particles, the so-called "electrons" or "ultimate corpuscles," each of which is at least 1,000 times lighter than the atom of H, and each of which, so far as can be made out, is the same as every other particle of the same magnitude, no matter what its source. It may not be true that the "element" radium decomposes into the "element" helium, as has already been asserted, but certain it is that physicists and chemists feel far less certain to-day of the elementary nature of the so-called elements than they have for a hundred years. Indeed, one of the oldest chemists in America was heard to say within a fortnight that, in his opinion, the principal work of the laboratories of physics and chemistry during the next ten years would be devoted to attempts to analyze and synthesize the elements. It is amusing to think of the excitement there would be among the gold-seeking alchemists of the middle ages—wherever they might be at the time—should some one be fortunate enough, in the not too distant future, to take electrons derived, say, from iron and combine them into the precious metal—gold. That such a thing may be suggested even shows to us clearly the great changes which are going on in chemical thought.

Again, there is the doctrine of "spontaneous generation" kept alive for so long by its supporters and especially by the unfortunate Bastian, until it was thoroughly extinguished by the researches of Tyndall and Pasteur. Would it be surprising if this dead doctrine were revivified? Surely no more so than the resurrection of alchemistic dreams. Those biologists who are busily engaged in the application of physical chemistry to the study of protoplasm are already cherishing again the possibility of sometime making living things from things not alive; some of them even dare to say so, and others would like to say so did they not fear that they would be suspected of carrying "bees in their bonnets." Truly, not all theories sleep that have closed eyes!

THE ALLEGED DANGERS OF STRYCHNIA.

In view of some recent criticisms regarding the use of strychnia as a cardiac tonic, it is well to note the other, and what clinical experience shows to be, the truer, side. Benedict[1] finds that strychnia approaches most nearly a strictly standardized remedy, chemically and physiologically; he says that, in his experience, it is the only drug from which a permanent result may be expected without danger or deleterious influence and which yet may be regarded as an artificial spur. He even suggests that strychnia may represent some chemical product of our organism, as caffein represents the alloxur bodies, more especially the xanthin radicle.

Of course, the beneficial use of strychnia implies reasonable care in its use, and his ideas as to this are specified as follows: "One milligram, t. i. d.: tonic dose for small adult, with no indication for marked effect. Two milligrams, t. i. d.: ordinary dose for gastric atony, secretory or motor, or for chronic cardiac weakness, functional or organic. Two milligrams five or six times daily: dose for marked cardiac weakness, either in medical or surgical cases; in the latter to give strength rapidly before operation or to prevent collapse afterward. This dosage should rarely be maintained for more than three or four days. Three to four milligrams: single emergency dosage in acute heart failure." Of course, individual circumstances may modify this dosage, but the above is given as near the average safe quantities in conditions mentioned above. Benedict says he rarely continues the use of strychnia or any other powerful drug for over two weeks, or usually for more than one week without interruption, and finds it more effective in this way. He has never yet seen a case of "snappy heart" from the use of strychnia in cardiac disease, though such a condition might result from overdosage, and he suggests that there is a tendency in reviewing our failures to incriminate ourselves and our drugs, and that strychnia may have unjustly suffered in this way.

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[1] Therapeutic Gazette, Sept. 15, 1903.

Within the above limits of safety the danger from the drug must be very exceptional. No class of physicians employs this agent more freely than the neurologists, and it is not from them that we principally hear the warning of its dangers, notwithstanding the fact that the doses given are sometimes almost excessive. An example is the use of progressively increasing doses of strychnia in certain spinal diseases advocated years ago by Jewell and more recently by Hammond and, apparently, without fear of damaging effects. If the system can adapt itself, as it appears it can, to doses of more than a grain of strychnin daily without acute toxic symptoms it would seem that its poisonous effects were subject to some exceptions. While it is a drug that must not be incautiously used, nevertheless it does not deserve all the condemnation it has received. There is hardly any more reliable and useful agent in the pharmacopeia, and if it is as dangerous as some suggest, it is time for a thorough reinvestigation of the subject.

SOUTH DAKOTA LEGAL TECHNICALITIES.

The experience with the new medical registration law in South Dakota is in many respects similar to that of Illinois with its medical registration law. The act exempted all who were in practice at certain dates from the provisions of the law, hence, notwithstanding a special provision to meet such cases, a recent judicial decision makes it impossible to discipline any one who was in practice before that period. It was not anticipated, of course, that the judges would put such an interpretation on the wording of the act, but from this and the Illinois experience it would appear that still more caution will be required in drawing up medical practice acts than has been sometimes the case. It will not do to generally exempt any class, old or new, but the law should specify just what they are exempted from. As it is, there may have to be new legislation both in Illinois and South Dakota to bring a certain class of disreputable practitioners under any legal control. In South Dakota the matter has not yet, so far as we know, been passed on by the highest court and perhaps can not be regarded as entirely settled.

"THE AGE OF PAP."

In an article published not long since in one of our British contemporaries, Dr. Harry Campbell designated the period in which we live as the "age of pap," referring by this to the growing tendency to the omission from our diet of foods which require mastication. The teeth are becoming—to a certain extent at least—more and more *functus officio* organs. The result is that, as a United States official, Dr. Wiley, is lately reported as saying, the human race is becoming toothless. Wiley also includes hair in the cutaneous outgrowths which we are losing, but we trust that, if only for esthetic reasons, it will be a long time before the result he prophesies will be fully brought about. There is no doubt, however, that degeneration of the jaws and teeth, which has been progressing every since man became an intellectual animal and depended less on them for raptorial purposes, is going about as far as is required with our present idea of convenience and beauty. Let us hope that there will be still some people who will chew their food, not only for health reasons, but also for good looks. An English writer has seen some good in the American habit of chewing gum in the exercise it gives the jaws. We are glad there is some virtue in it.

AMALGAMATION OF MEDICAL SCHOOLS.

Last week the well-known Trinity Medical College of Toronto was united with the Medical School of the University of Toronto.[1] The medical faculty of the provincial university, as thus enlarged, contains the ablest medical scientists and practitioners in Ontario, and one of the strongest teaching faculties on this continent. Toronto, in the fusion of her medical schools, has added her example to that of some cities of the United States—an example which may well be seriously considered in some other places. A waste of money, time and energy involved in the organization and maintenance of two or more large medical schools where one would suffice is appalling. The concentration of effort, the saving of expense, the increase in efficiency and, not least, the increase in harmony in the activities of the profession which would result from the amalgamation of medical schools in many of our cities would be of incalculable value in furthering medical education. For successful "marriages" to take place between medical schools, the contracting parties must be high-minded and unselfish. The members of their faculties must care more for the good of their students, for the future welfare of the school and for the profession as a whole, than for their own personal interests. It must not be forgotten, though, that even after fusion has taken place and where the faculties are large, multiple dangers beset the path. Many adjustments have to be made, and there must be concessions on both sides, but an earnest desire to do the best thing, combined with honest open speech, will often overcome the greatest of difficulties of reorganization, especially where mutual respect, mutual consideration and mutual kindness prevail.

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[1] See Canada news column, this issue.

Medical News.

ILLINOIS.

To Hidden Shansi.—Dr. W. A. Hemingway, Oak Park, sails with his wife from San Francisco for his new field of labor in Shansi, China, on the *Coptic*, October 31.

Alleged Healers Give Bail.—"Drs." Parker and Hall, the alleged magnetic healers who were arrested in Omaha and brought back to Peoria to answer to the charge of swindling, were released on bail of $900 each.

Early Investigator of Hypnotism Dies.—J. Stanley Grimes, prominent in the early investigations of hypnotism in the middle of the nineteenth century and for a time professor of medical jurisprudence in the Castleton (Vt.) Medical College, died at Evanston, September 28, aged 96.

Sanitary Inspection of Illinois Cities.—During the past week Dr. E. F. Baker, inspector for the State Board of Health, has made an inspecton of Taylorville, Pana, Shelbyville, Carlinville, Carrollton, Petersburg, Havana, and Mattoon. The sanitary condition of all these cities is reported as good. A few cases of scarlet fever were found in and near Taylorville, and two cases of diphtheria at Pana, with one death. Havana is free from smallpox after a year's prevalence.

Examination of National Guard Medical Officers.—On September 26 a board consisting of Surgeon-General N. Senn, Assistant Surgeon-General G. Paull Marquis and Major Charles Adams held the first examination of candidates for commissions in the medical department of the National Guard, under the new military code. The examination was held in the Senn Hall, Rush Medical College, and six candidates appeared, four of whom were physicians, one a veterinary surgeon, and one a dentist. Examinations will be held semi-annually hereafter.

Chicago.

Personal.—Dr. Oel S. Misick has given up practice and will engage in banking business in Missoula, Mont.——Dr. V. Pleth has returned from abroad.

Poor Milk Prosecutions.—For selling milk below grade, nineteen dealers were fined from one to twenty dollars each, on October 1, by Justice Gibbons.

Health Department Changes.—Dr. William K. Jaques, head of the municipal laboratory, has resigned, and Dr. F. Eldridge Wynekoop, assistant superintendent, is temporarily in charge of the laboratory.

Hospital Opened.—The Victoria Memorial Hospital and Training School, which occupies the old home of ex-Mayor Swift, on Loomis street, was opened with an address by Dr. Ezekiel P. Murdock, October 2.

September Suicides.—Of the 54 deaths by suicide in September, 16 were caused by carbolic acid, 9 by gunshot wounds, 7 by gas asphyxiation, 6 by opium, 4 by cutting throat, 3 each by hanging, and undetermined poisons, 2 by paris green, and one each by chloroform, formaldehyd, hydrocyanic acid and burning.

Rush College Commencement.—At the quarterly convocation, held October 5, twenty-two were graduated from Rush Medical College (Medical Department, Chicago University). The address was delivered by Prof. L. Sherrington of Liverpool, England, his subject being "Localization of Cerebral Centers in the Ape." The lecture was illustrated by lantern slides.

Illinois Medical College Commencement.—On September 30 a class of 42 was graduated from the Illinois Medical College. The doctorate address was delivered by Hon. Edmund W. Burke; Dr. William C. Sanford, secretary, read the annual report; the dean, Dr. B. Brindley Eads, made the announcement of the graduating class, and the president, Dr. Heman H. Brown, conferred the degrees.

IOWA.

Personal.—Dr. Alvin B. Poore, Cedar Rapids, has returned from Europe.

Coming Examination.—The next examination of physicians will be held in the Capitol building, Des Moines, October 21 and 22.

Osteopaths Want Office.—A petition with five thousand signatures has been laid before the governor, asking that he appoint an osteopath as a member of the State Board of Health.

Infectious Diseases.—During August outbreaks of diphtheria occurred at Des Moines, of scarlet fever at Des Moines and Lost Nation, and of smallpox at Webster City, Massillon Township, Vandalia, Cascade, Runnells, Des Moines Township and Perry Township.

Medicine Sample Distribution Prohibited.—The City Council of Iowa City has passed a resolution making it a criminal offense punishable by fine to distribute broadcast samples of medicine. This action has been taken because a number of children have been made ill by eating or drinking samples of medicine thrown into dooryards by patent medicine men.

KENTUCKY.

Regret Dr. Lewis' Death.—At the meeting of the Daviess County Medical Society at Owensboro, September 15, resolutions were adopted respecting the death of Dr. Charles C. Lewis, Owensboro.

Louisville's Smallpox Record.—During the fiscal year just closed St. John's Eruptive Hospital, Louisville, admitted 1,105 smallpox patients. Of these 16 died, ten from smallpox, two from nephritis, and the others from gastroenteritis, pneumonia and heart disease.

Regulation of College Fees.—Since the catalogue of the Louisville Medical College was sent out the Kentucky State Board of Health has adopted regulations as to fees, etc., to which all medical schools must conform. In conformity to these regulations the dean, Dr. Clinton W. Kelly, announces that the fees of the college will not be less than $55 to any student for the session of 1903-1904.

To Test Status of a So-Called Charitable Institution.—In the fall of 1902 the John N. Norton Memorial Infirmary was sued for damages by a former charity patient who had undergone an operation and who, while under the influence of the anesthetic, was burned by the contact of a hot water bag. The attorneys for the institution, in answering the plaintiff's petition, pleaded that the Norton Infirmary was a charitable institution, and could not, under the laws, be held liable for damages. The plaintiff's attorneys deny that the infirmary is strictly charitable, and allege that it is conducted, at least indirectly, for compensation. Judge Gordon holds that if it is a charitable institution, it is not liable for damages to the plaintiff. The case will go to trial to decide on the character of the institution. This point has never been settled in Kentucky regarding an institution of that character.

Louisville City Hospital Troubles.—Superintendent Dr. Ellis Duncan and Superintendent of Nurses Miss Alice M. Gaggs have been summarily dismissed by the Board of Public Safety. On the return of Miss Gaggs from her annual vacation she found a scandal developed because of alleged immoral conduct on the part of two nurses and three orderlies at the hospital. After an investigation, in which Miss Gaggs asserts the charges were substantiated, the two nurses were discharged. Her action was sustained by Dr. Duncan. The nurses appealed to the Board of Public Safety and were reinstated, but the orderlies were dismissed. Miss Gaggs requested an investigation, which was refused, and without notice she was removed. Dr. Duncan's removal soon followed. Dr. George Jenkins, former secretary of the hospital, is temporarily in charge, and Miss Ziegler, a graduate of the hospital training school, has been appointed superintendent of nurses. At a conference held October 2 it was practically decided that changes in the management of the hospital will be made within thirty days. The deans of the six medical colleges in the city were present and agreed with the mayor and Board of Public Safety that it would be best to have a business man in charge of the hospital, the medical department being in charge of a house surgeon, who will have nothing to do with the business end. He will probably be chosen from the staff of internes, who will be appointed as at present, from the medical colleges.

MARYLAND.

Baltimore.

Bosley Reappointed.—On September 29 Dr. James Bosley was reappointed health commissioner at a salary of $3,000.

Vital Statistics.—During September there were 707 deaths and 767 births in the city. Of the deaths 28 were from typhoid fever, which, with diphtheria and scarlet fever, constituted the chief infectious diseases.

Personal.—Dr. Eugene F. Cordell fell down a stairway, September 28, and was severely injured.——Dr. Jackson Piper has gone to Atlantic City to spend several weeks.——Dr. T. Casper Gilchrist has returned from Europe.

Tuberculosis Exposition.—In connection with the meeting on tuberculosis to be held here in January next there will be an exposition of appliances for combating infection and promoting cure and a series of popular lectures will be given.

The Herter Lectures.—The Christian A. Herter lecture, the first of the series established by Dr. and Mrs. Herter of New York City a year ago, was delivered by Dr. Herter at Johns Hopkins Physiological Laboratory, October 6, on "The Work of Pasteur."

The New College Year.—The Woman's Medical College opened October 1 with an address by Rev. Donald Guthrie, D.D. ——At the College of Physicians and Surgeons the address was by Dr. Geo. W. Dobbin on "The History of American Obstetrics."——That at the Maryland Medical College was by Dr. Alexander D. McConachie.——At Baltimore University Dr. A. Miller Reid was the speaker.——There was no formal opening at the University of Maryland.

MASSACHUSETTS.

Lynn Prepared for Emergencies.—The new smallpox hospital located near the contagious disease hospital on the outskirts of Lynn is almost ready to receive patients.

Osteopath Fined.—Everett P. Clisby, an osteopath of New Bedford, was fined $200, September 26, for practicing medicine without a license. He appealed and was held in bonds of $500. His defense was that by the title "doctor" he never meant anything but doctor of osteopathy.

Shot and Sandbagged, But Still Fights.—Dr. Frank Sanft, Roxbury, while returning from a professional call, was attacked by a footpad, sandbagged, and as he still resisted, shot through the foot. Notwithstanding his injuries Dr. Sanft was successful in fighting off his assailant.

Personal.—Dr. T. Adolf Jones, Boston, has been appointed professor of pathology and clinical microscopy at Flint Medical College, New Orleans.——Dr. Charles H. Richardson, Pittsfield, has been made a member of the surgical staff of the House of Mercy in that city.——Dr. Walter S. Carr, North Adams, has been compelled to give up practice on account of ill health, and will move to Colorado.

MICHIGAN.

Physician Fined for Delay.—Dr. William J. Hare, Detroit, was fined $5 by Judge Frazer, September 5, for failing promptly to respond to a subpena.

Crippled, But Continues Practice.—Dr. Isaac L. Polozker, Detroit, county physician, slipped while alighting from a car and fell, fracturing his left arm near the shoulder. After the arm was reset and a dressing applied, Dr. Polozker went pluckily to work.

Colleges Open.—Grand Rapids Medical College opened October 1 in its new buildings. The faculty has been increased as follows: Dr. William De Lano, lecturer on hygiene and sanitary science; Dr. Thomas C. Irwin, physical diagnosis; Dr. Lotan C. Read, dermatology; Miss Clara Nichols, general chemistry, and Dr. Joseph A. Heasley, nose and throat.—Michigan College of Medicine, Detroit, opened for the year, September 29. Addresses were made by Drs. William A. Hackett, Hal C. Wyman, and Dayton Parker, Detroit, and Dr. Alonzo B. Cornell, Kalamazoo.

PENNSYLVANIA.

Philadelphia.

Jewish Hospital Dedication.—On Sunday, October 4, an immense crowd attended the dedication of the three new buildings of the Jewish Hospital.

New Site for College.—Ground for a new building has been secured by the College of Physicians at the corner of Twenty-second and Locust streets.

Toy-Pistol Dealers Indicted.—Indictments against three retail dealers were recently returned by the grand jury on the charge of selling toy pistols to minors. Indictments were also returned against two wholesale dealers charging them with supplying the pistols to retailers. The action was prompted by the many cases of tetanus recently caused by pistol injuries.

The City's Health.—The records show that, for the week ended October 3, only two new cases of smallpox occurred. Typhoid fever still continues to a considerable extent, there being 76 new cases within the week, 5 fewer than for the previous week. Diphtheria and scarlet fever persist, there being for the week 60 new cases of the former and 70 of the latter disease.

Clinical Lecturers Selected.—The following have been selected to give the clinical lectures at the Philadelphia Hospital the coming fall and winter: Medical—Drs. Roland G. Curtin, S. Solis-Cohen, John H. Musser and William E. Hughes; surgical—Drs. W. Joseph Hearn and Dr. Orville Horwitz; neurologic—Dr. Charles K. Mills; laryngologic—Drs. R. B. Gleason and G. Morely Marshall; orthopedic—Dr. H. Augustus Wilson; dermatologic—Dr. Henry W. Stelwagon; pediatric—Drs. W. C. Hollopeter and J. Madison Taylor; Röentgen-ray therapeutics —Dr. M. Kassabian.

Pure Food Crusade.—What may be considered an important move in the crusade against the manufacture and sale of impure foodstuffs was recently marked in a suit begun by a retail dealer against a manufacturer of lard. The plaintiff seeks to recover $5,000 damages for injury to her business reputation. The retailer had previously been arrested on the charge of selling adulterated lard, which had been represented by the wholesale dealer as pure, but which, on analysis, was found to contain cottonseed oil and other adulterants. It is said that a number of brewers, distillers and dealers in spirituous liquors, who are to answer to the charge of manufacturing and selling adulterated wares, are to offer the defense that beer and other beverages are not food, and that, therefore, the law of 1895 does not apply to them. It is believed that such a defense will be unavailing, for, if the act cited should not cover the cases, Dairy and Food Commissioner Warren has recourse to two other earlier statutes specifically applying to the adulteration of malt and spirituous liquors. The penalty for the violation of the last-mentioned acts is specific and heavier than for that of the former.

GENERAL.

Navy Medical School Opens.—On October 1 the second session of the Navy Medical School opened in Washington with a class of 26.

Yellow Fever in Texas.—In Laredo, Texas, 37 cases of yellow fever are reported, and 16 of these had been, up to September 29, declared genuine. The situation in Mexico is not reported as particularly changed.

CANADA.

The Unified Toronto University.—The official opening of the new medical building and laboratories of Toronto University occurred October 1, marking the union of the faculties of Trinity and Toronto, old rivals for many years, but now strongly cemented into one, which henceforth will mark Toronto as a medical center of the first rank. The opening address was delivered by Professor Sherrington of Liverpool, President Loudon of the university presiding. The University of McGill was represented by Prof. T. G. Roddick, M.P., and Professor Adami; Queen's University, Kingston, by the Hon. Dr. Sullivan; Johns Hopkins by Profs. W. H. Welch and William Osler; Yale by Prof. R. H. Chittenden; Jefferson by Prof. W. W. Keen; Chicago by Prof. Lewellys Barker; the University of Buffalo by Roswell Park; the University of Michigan by Professor McMurrich, he and Dr. Barker, being graduates of Toronto University; Harvard by Prof. Townsend Porter, and the University of Pennsylvania by Prof. A. C. Abbott. According to Professor Sherrington three kinds of workers must stand side by side in order that society may draw due benefit from wells of natural knowledge. First, there is the investigator, the fountain-head of the knowledge that is for distribution. After the investigator comes the teacher to whom it belongs to diffuse the knowledge; and third, there is the applier of natural knowledge. There is a new era dawning when the local university as an institution will be entitled to support from the public means. Professor Sherrington closed a very able address by saying: "So shall these laboratories prove a cornerstone for the upbuilding of a temple of knowledge, and a touchstone for the best ore of intellect within the bounds of this great land." At the close of the able lecture by Professor Sherrington, Professor Loudon called on each of the representatives from sister institutions, commencing with Professor Welch, who one and all expressed their appreciation of being present on such an auspicious occasion, and wishing the new medical faculty godspeed. In the evening in the gymnasium Professor Osler delivered the annual opening address to the students. Although he did not particularly believe in these opening addresses, he was very pleased to be the recipient of the honor on the present occasion. Like Professor Sherrington, he paid a high tribute to the work of Prof. A. B. McCallum of the department of physiology, whom, he stated, had won for himself a world-wide fame by his intricate studies. It was not too much to hope that London and Queen's would affiliate with the University of Toronto. Dr. Osler is a pronounced enemy of worry and warns against taking any thought of the morrow. At the close of this lecture short addresses were delivered by the dean, Dr. Reeve, and by Dr. J. A. Temple, formerly dean of Trinity Medical College. Dr. Temple stated that after turning out prominent medical men the world over for twenty-eight years, he, like his confrères, did not like too well the thought of amalgamation, but believing it for the best interest of the profession in Toronto and the province of Ontario, they would do all in their power to uphold and advance that interest. Special convocation was held October 2, at which the following distinguished visitors received the honorary degree of LL.D. from the university: William Williams Keen, Philadelphia; William Henry Welch, Baltimore; William Osler, Baltimore; Russell Henry Chittenden, Yale University; Charles S. Sherrington, University of Liverpool; Henry Pickering Bowditch, Harvard University (*in absentia*). In the evening in the university the faculty of medicine tendered the visiting gentlemen a banquet, one of the principal speeches of the evening being delivered by Mr. Alfred Moseley, C.M.G., chairman of the educational commission which is shortly to visit the United States and Canada. Special addresses were also delivered to the students in the two large lecture rooms by Professors Barker, Abbott and Adami.

FOREIGN.

Anti-Alcohol Circular.—The Prussian government has issued an anti-alcohol circular similar to the one on tuberculosis for widespread, gratuitous circulation.

Plague Continues in China.—Both plague and cholera are said to be more serious than before reported near Tien Tsin, China. Foreign military authorities are coöperating in the quarantine of Peptang, a city on the Gulf of Chili, where bubonic plague is very prevalent.

Insurance of Physicians During Epidemics.—The government of a Caucasian province in which typhoid fever is endemic has insured the lives of all the physicians in the district against the fever. The 14 physicians are insured for more than $5,000 each; 2 students for half this sum, and 21 health officers for about $2,000 each.

Industrial Contagion of Syphilis.—The French courts recently decided a case admitting that an employer is responsible for damages in case of the transmission of syphilis by the intermediation of a professional instrument. In the case before the court, a glassblower claimed that he had been infected by the tube passed from hand to hand, but the evidence was not conclusive, and his claim was not allowed.

Consumptives on Mont Blanc.—Dr. Kuss, superintendent of the great public Angicourt sanatorium near Paris, has accompanied a number of tuberculous patients to the Vallot observatory near the summit of Mont Blanc. They expected to stay a week or two for physiologic tests and to determine whether rarefied air is of benefit to consumptives. Dr. R. Bayeux is there also, continuing Hénocque's studies on hematoscopy.

The Plague Epidemic at Marseilles.—Later reports state that no less than 29 workmen employed in the paper factory at Marseilles presented symptoms suggesting the pulmonary form of plague. They had been handling rags imported from Constantinople and dead rats had been found in the bales. Six deaths have occurred, but the energetic measures at once adopted seem to have arrested the epidemic, and the quarantined employes have been released. The factory was burned and all employed about the place were carried to a quarantine station. Two of the nurses tending the plague patients contracted the disease.

LONDON LETTER.

The Etiology of Sleeping Sickness.

The etiology of sleeping sickness or negro lethargy has of late received much attention. Its peculiar geographical distribution—between the valleys of the Senegal on the north and the Congo on the south—suggests a local cause. It has never been known outside this area. But the disease may develop years after leaving the endemic area. A commission of investigation was sent out to Uganda by the Royal Society in 1902. One of the members, Dr. Castellani, reported that in examining the cerebrospinal fluid obtained by lumbar puncture in a well-marked case he found a living trypanosoma. In further investigations he found the organism in 70 per cent. of the cases. As a working hypothesis he suggested that sleeping sickness is due to the trypanosoma and that in the last stages there is concomitant streptococcus infection. Another commission consisting of Lieut.-Col. Bruce, F.R.S., and Dr. Nabarro was then despatched. They arrived in Uganda on March 16, and have now made a "progress report." They adopted Dr. Castellani's method of examination. Ten c.c. of cerebrospinal fluid removed by lumbar puncture were centrifuged. The sediment was examined under the microscope. The trypanosomes were never very numerous (in some cases only one was found in several slides), but they were found in every one of 40 cases examined and at all stages of the disease. The cerebrospinal fluid of the general population was found not to contain trypanosomes. It was also shown that the parasites were present in the blood of all the patients suffering from the disease. The suggestion has been made that the trypanosomes are conveyed by some biting insect. Experiments show that the Uganda tsetse fly can carry the trypanosoma from animal to animal.

Roman Catholicism and Leprosy; Leprosy in Colombia.

In maintaining the fish hypothesis of leprosy Mr. Jonathan Hutchinson has often adduced facts tending to show that the fast days of the Roman church are in many parts of the world conducive to the spread of the disease. In a recent letter to the *Times* he makes a strong point out of the prevalence of the disease in Colombia. Here the earliest Spanish settlements were made, and, according to tradition, the first cases of leprosy on the American continent occurred. The disease is now frightfully prevalent there, much more prevalent than in India, which has been described as "the land of the leper." In Catholic Colombia where the consumption of fish receives a stimulus from religious ritual there are 70 lepers per 10,000. In India where large sections of the population have a prejudice against fish there are only 6 lepers per 10,000. Mr. Hutchinson asks what explanation those who believe that leprosy spreads by contagion have to offer. The Colombians do not expose themselves to the risk of contagion more than the Hindus, and during the last 30 years more energetic measures of segregation have been enforced in the former country. Further, the great prevalence of the disease in Colombia corresponds to the condition of fish supply. In many inland districts the natural supply of fish is deficient. Here, as in mid-Europe of the middle ages, an artificial demand creates a supply in bad condition. Moreover, fast days occur all through the year, during many months of which fresh fish may be out of season and not obtainable.

The Plague in India: The Rising Epidemic.

During the last week of August the mortality from plague has much increased in the Bombay Presidency, the deaths rising from 2,838 to 5,568. In Central India there has been an increase from 131 to 331 and in Mysore from 331 to 535. In the whole of India the mortality has risen from 3,613 to 6,817.

Correspondence.

Postmortems.

Chicago, Sept. 29, 1903.

To the Editor:—Referring to your editorial of September 5, on "Compulsory Postmortems," it seems to me worth while to emphasize the fact that permission for postmortems can frequently, if not usually, be obtained if the friends are duly considered and properly approached. It would certainly be a salutory custom from the layman's point of view if it were traditional to hold postmortems on all the dead, especially if the physicians in charge were expected by custom to write their colleagues to be present. The wholesome effect that this "facing the music" has in hospital life in calling forth every known diagnostic effort, and leading to due appreciation of responsibility because of the fear of criticism at the morgue table by one's colleagues, is well known to all who have been internes. If the layman fully understood the inward significance of the phrase "Dead men tell no tales" autopsies would be much more general than they are, and, incidentally, I see no reason why some lay representative of the family should not be present if it were so desired.

From the general practitioner's point of view there is no need to make postmortems on such as die after a typically defined course of some well-known disease, as such pathology may be seen every day in the larger hospitals, but sometimes the diagnosis remains obscure to the end or ill-defined complications arise that the truly scientific physician would like cleared up if possible. He is often able by the exercise of a judicious finesse to make a fairly complete autopsy through a four or five inch incision made between the ensiform and the umbilicus. If the physician has the tact and takes the trouble to explain how very small the incision will be, that it will be neatly closed with white silk—untidy work on the dead is a desecration unworthy a physician—that all organs will be replaced if desired, that nothing but the abdominal wall will be cut when this can be promised, that the family will be welcome at the autopsy if this be practicable, as it sometimes will, and that the embalmer may do his work at the same time, then it will be found that many autopsies may be secured that are lost by neglecting to remove the belief that it is necessarily an extensive mutilation, leaving many visible marks. Where the brain is concerned a cleanly worker can promise that the incision will be entirely hidden by the hair and no evidence of the examination be noticeable. James W. Walker, M.D.

A Universal Practitioner's License.

Los Angeles, Cal., Sept. 4, 1903.

To the Editor:—In The Journal, August 29, p. 568, among the unsuccessful candidates in the Tennessee reports of registration, candidate 54, a graduate of the College of Physicians and Surgeons, Baltimore, class of 1876, failed with a per cent. of 70. This fact substantiates the remarks of Dr. T. A. Borton in his article "The Turning Down of the Old Practitioner" published in The Journal, August 22, p. 505, with the exception that here the other unsuccessful candidates were nearly all recent graduates. Not knowing the questions asked and judging from the markings alone, I have nothing to say against this particular examining board; but I would like to have the following remarks reach those members of the profession who have more influence and power than has the average general practitioner. Something more is needed than a higher curriculum for the elevation of the profession, something that will make the American public respect the well learned doctor and not the well-to-do "Dock," as Dr. W. E. Quine classified them in one of his eloquent speeches. Any school with the best facilities and longest course in this country or abroad furnishes only the key to knowledge. Many of the best teachers in medicine to-day did not know the difference between an acid and an alkali at the time of their graduation years ago. The majority of successful practitioners, who were good students ten years ago, would not be able to pass a technical examination to-day with a higher per cent. than 60, and I *do* not think it right to make the old practitioner suffer for the pre-existing laxity of the laws in any shape or manner, and all these different board examinations in the eyes of the public, prove to be a lack of self-confidence somewhere, by not recognizing the credentials of a reputable medical college from one state to another. The more privileges there are granted to improve the condition of the general practitioner, the more encouragement there will be for progressive study and investigation, and the fewer there will be of those who resort to quackery, criminal operations, fraudulent certificates and unethical conduct toward one another for the sake of the dollar. To remedy this. or at least the greater part of it, I beg to suggest the following rough sketch:

> The American Medical Association shall elect one member in each state for the term of one year. These gentlemen shall constitute the Medical Council of the United States. Their aim shall be to elevate or to better the educational, moral and material condition of the American practitioner. They shall hold regular conventions at least twice a year. At their first convention they shall at once declare all those colleges which are now members in good standing in the Association of American Medical Colleges entitled to grant an interstate certificate to each of their graduates, after passing a satisfactory examination under the state board of examiners, in which the state member of the council shall act as chairman at the time of the examination, and on the same principles conducted now by the different boards. This interstate certificate shall entitle the holder to practice medicine and surgery all over the Union. or, at least, in those states that will hold membership for reciprocity in the Medical Council at that time. Those states that will join the Medical Council later on will have to open their doors to the same candidates that passed the council's examination before their membership began.
>
> This council shall also issue an interstate certificate to every old practitioner in good standing and holding a state license who is a member of the United States Medical Council, without an examination.
>
> This council shall have judiciary power to decide on questions arising from time to time in the different states and relating to medical colleges. state board examinations. state medical societies and all other interests in the general welfare of the profession at large. The decision of the council in every case shall be final.

Considering the advance in surgery made by American surgeons, I am sure that foreign countries will seek reciprocity with the United States in the near future.

423 California Street. S. B. Lyon, M.D.

State Boards of Registration.

American Confederation of Reciprocating, Examining and Licensing Medical Boards.—A meeting of this body is called at the Southern Hotel, St. Louis, for October 27. An invitation is extended to all licensing boards to be represented at the meeting. The secretary of the confederation is Dr. B. H. Harison, Sault Ste. Marie, Mich.

Preliminary Examinations.—A committee of the Michigan State Board of Registration in Medicine met at Detroit to look into the work being done by the different medical colleges of that city. The committee formulated a standard for the admission of students to the medical colleges of the state. The law requires that *matriculants must at least be graduates of* high schools having a classical course. Those who are not will have to pass an examination.

Marriages.

Emil C. Becker, M.D., to Miss Ida Grace Beal, both of Chicago, September 16.

Edward Hicks Hume, M.D., to Miss Lotta Carswell, both of Baltimore, September 24.

Louis P. Hamburger, M.D., to Miss Freda Cohn, both of Baltimore, September 20.

Henry Maynadier Fitzhugh, M.D., to Miss Mary Aldridge, both of Baltimore, September 23.

Adelbert H. Benson, M.D., Faxon, Okla., to Miss Ella M. Rahnapop of Chicago, September 23.

J. M. Biedler, M.D., Bridgewater, Va., to Miss Ina E. Long, Shenandoah County, Va., September 16.

Frederick William Parker, M.D., to Miss Grace Elizabeth Peabody, both of Chicago, September 23.

Benjamin R. Parke, M.D., Wellsville, Ohio, to Miss Roberta Reynolds of Buffalo, N. Y., September 23.

Eugene Gates, M.D., Two Rivers, Wis., to Miss Gertrude Cordelia Marsh of Chicago, September 17.

Henry E. Haskins, M.D., Kingman, Kan., to Miss Bertha B. Knappenberger of Penalosa, Kan., September 20.

Daniel F. Royer, M.D., Orange, Cal., to Mrs. Hettie Wilbur of Los Angeles, at Kingman, Ariz., September 16.

Arthur N. McKeever, M.D., Romney, W. Va., to Miss Katherine Keller, at Frostburg, Md., September 23.

Harvey Grant Beck, M.D., Baltimore, to Miss Katherine Elizabeth Clagett, at Blairsville, Pa., September 23.

Simon Flexner, M.D., New York City, to Miss Helen Whitall Thomas, at Bryn Mawr College, Pa., September 17.

William van Valzah Hayes, M.D., New York City, to Miss Mary Coulbourne Conner of Altoona, Pa., September 9.

Meriweather Lewis Anderson, M.D., of Albemarle County, Va., to Miss Annie Tatum, at Richmond, Va., September 23.

Deaths.

Calvin Skinner, M.D. Dartmouth Medical College, Hanover, N. H., 1841, surgeon of the One Hundred and Sixth New York Volunteers in the Civil War, some-time president of the Northern New York Medical Society and the Franklin County, N. Y., Medical Society, died at his home in Malone, N. Y., September 24, aged 85.

John M. Allen, M.D. University of Vermont, Burlington, 1890, a member of the American Medical Association, surgeon to Brightlook and St. Johnsbury hospitals, member of the Vermont State Medical Society, who was injured in an automobile accident, September 17, died at his home in St. Johnsbury, Vt., September 18.

J. B. Winn, M.D., of Macon, Mo., in whose honor the Macon County Medical Association gave a banquet a few years ago, the oldest physician in Northern Missouri, died at the home of his daughter in Kirkwood, Mo., September 23, aged 88.

Daniel B. Howard, M.D. Albany (N. Y.) Medical College, 1865, ex-president of the Warren County Medical Society, died suddenly at his home in Warrensburg, N. Y., September 21, from neuralgia of the heart, aged 62.

George Doughton, M.D. College of Physicians and Surgeons, Baltimore, Md., 1884, of North Wilkesboro, N. C., died at the University Hospital, Baltimore, September 24, after an operation for cancer of the neck, aged 38.

Frederick J. Halton, M.D. Long Island College Hospital, Brooklyn, 1883, after a long invalidism from rheumatism, died at his home in Brooklyn, N. Y., September 24, from valvular heart disease, aged 45.

Stephen Terry Biggers, M.D. Southern Botanico-Medical College, Macon, Ga., 1835, a pioneer of Atlanta, Ga., died at Cornelia, Ga., September 21, from pleurisy, after an illness of twelve days, aged 92.

George W. Crider, M.D. Medical College of Indiana, Indianapolis, 1879, of Buck Creek, Ind., died at the Home Hospital, Lafayette, Ind., September 21, from heart disease, after a long illness, aged 68.

Samuel T. Dodd, M.D. Western Reserve University, Cleveland, Ohio, 1867, died at his home in East Palestine, Ohio, September 22, from heart disease, after a lingering illness, aged 68.

Margaret Eleanor Peery, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1897, of Monticello, Iowa, died at Butte, Montana, from acute pleurisy, September 19, aged 47.

William E. Naughton, M.D. Long Island College Hospital, Brooklyn, 1896, died at his home in Brooklyn, N. Y., September 23, from pneumonia, after an illness of one week, aged 29.

Robert H. Gordon, M.D., quarantine officer of Norfolk, Va., during the yellow fever epidemic of 1855, died suddenly at his home in that city, September 22, from apoplexy, aged 77.

Lincoln A. Stewart, M.D. Boston University School of Medicine, 1895, of Clinton, Mass., was drowned in the Penobscot River, near West Brookville, Me., September 20, aged 55.

Ernest W. Spinney, M.D. Chicago Homeopathic Medical College, 1896, died at his home in Reed City, Mich., September 22, from appendicitis, after a short illness, aged 35.

James A. Johns, M.D. Medical College of the State of South Carolina, Charleston, died suddenly at his home near Westminster, Ga., September 11, from paralysis, aged 71.

Joseph L. Hagerty, M.D. Rush Medical College, Chicago, 1870, died at his home in Topeka, Kan., September 24, after a long illness due to exposure during the recent flood.

George W. Colby, M.D. National Medical College, Washington, D. C., 1869, for more than 35 years a practitioner of Sutton, Vt., died at his home in that place, September 13.

Edward C. Swift, M.D. University of Pennsylvania, Philadelphia, 1868, died at his home in Easton, Pa., September 23, after an invalidism of nine years, aged 60.

William C. Wells, M.D., resident physician at the Reed City (Mich.) Sanitarium, died suddenly at the institution, September 19, from apoplexy, aged 70.

John T. Sankey, M.D. University of Pennsylvania, Philadelphia, 1847, died at his home in Tharin, Ala., September 18, after a protracted illness, aged 77.

E. G. W. Simpson, M.D. McGill University, Montreal, 1901, died at his home in Lennoxville, Que., September 23, from typhoid fever, aged 27.

Henry C. Sheppard, M.D. Hahnemann Medical College, Philadelphia, 1878, died at his home in Germantown, Philadelphia, September 23, aged 63.

Auburn C. Henry, M.D. Memphis Medical College, 1859, died suddenly from heart disease at his home in Woodlawn, Ala., September 24, aged 60.

Orsemas Deremo, M.D., an eclectic physician of Elon, Iowa, died at his home in Center Township, September 20, after a long illness, aged 78.

Mary A. Boyd, M.D. Hahnemann Medical College, Chicago, 1886, died suddenly at her home in Los Angeles, Cal., September 21, aged 62.

John Person, M.D., died at his home in Fremont, N. C., September 18, aged about 75.

Lucius C. Coke, M.D. Medical College of Virginia, Richmond, 1859, died at his home near Palmyra, N. C., September 10, aged about 70.

Jedediah T. French, M.D., 1840, of Knoxville, Iowa, died at the home of his daughter in Hutchinson, Kan., September 23, aged 80.

William P. Rothrock, M.D. Jefferson Medical College, Philadelphia, 1842, died at his home in Floral, Kan., September 13, aged 83.

Miscellany.

The Union of the Profession in New York.—The following correspondence and action make it look very promising for an amalgamation of the two organizations in New York:

SYRACUSE, N. Y., May 28, 1903.

Dr. F. H. Wiggin,
President of the New York State Medical Association.

My Dear Doctor:—At the last meeting of the Medical Society of the State of New York the committee on conference appointed to confer with a similar committee of the New York State Medical Association, after making its report, was continued and instructed to await the action of the American Medical Association at New Orleans before considering further the methods of amalgamating the regular profession of the State of New York.

At a recent meeting of the American Medical Association radical action was taken removing the obstacle which prevented unification. Appreciating the fact that no further barrier stands in the way of unifying the profession of the State of New York into a single state society, the committee representing the Medical Society of the State of New York would respectfully ask the New York State Medical Association that further conference with its representatives be arranged, with the object of speedily settling on a definite plan which shall form the basis for amalgamation of the two existing bodies. In making this request the committee representing the Medical Society of the State of New York assures the association of its earnest desire to increase the influence of the state profession by the action suggested; that it would further state to that body that it is ready to suggest to he Medical Society of the State of New York that it amend its charter to continue, consolidate and amend Chapter 138 of the Laws of 1806, Chapter 94 of the Laws of 1813 and Chapter 452 of the Laws of 1900 for the purpose of cultivating and advancing the science of medicine, the promotion and protection of public health. and the establishment of a death benefit fund for the dependents of the members of the Medical Society of the State of New York. That it feels justified still further in assuring the association that it will recommend to the state society the method of organization founded on the plan suggested by the American Medical Association and considered by the joint conference when in session in April, 1902, and that all other matters of detail which must be considered before final action can be taken by the respective societies must, of necessity, become subjects for conference.

The committee asks for careful deliberation in conference, that both the society and the association may in the near future be able to present completed and satisfactory plans to the state bodies for ratification. Respectfully,

(Signed) Henry L. Elsner, chairman; A. Jacobi, A. Vander Veer, George R. Fowler, committee.

NEW YORK, June 10, 1903.

Dr. Henry L. Elsner,
Chairman Committee on Conference,
Medical Society of the State of New York,
Syracuse, N. Y.

My Dear Doctor:—I have received your communication of the 28th requesting the appointment by our association of a committee to confer with your committee relative to plans for uniting our state bodies, signed by yourself, Drs. A. Jacobi, A. Vander Veer and George R. Fowler, and I shall take pleasure in presenting it to our council at the earliest practicable moment for consideration and such action as they may see fit to take on it, as, under our constitution and by-laws, matters of importance are so referred.

Respectfully yours,
(Signed) Frederick Holme Wiggin, president.

In pursuance to the above a special meeting of the Council and Fellows of the New York State Medical Association was held in the New York Academy of Medicine, at which there were 70 present. After reading the above correspondenec the following preamble and resolutions were offered by Dr. Joseph D. Bryant and were unanimously adopted:

WHEREAS, The members of the New York State Medical Association desire a union of the medical profession in the State of New York, and

WHEREAS, It is deemed expedient, for the attainment of this purpose, to make further effort to bring together the New York State Medical Association and the Medical Society of the State of New York under the name of "The Medical Society of the State of New York."

Resolved, That a committee of five be appointed by the chair, and said committee is hereby empowered to do whatever is necessary and expedient to bring about such a union in a just and equitable manner, and

Resolved, That the committee so empowered may confer, co-operate and unite with a committee of the Medical Society of the State of New York for the purpose of forming said union of the two medical organizations, and

Resolved, That a copy of these resolutions be transmitted to the secretary of the Medical Society of the State of New York, with a request that their conference committee be granted similar powers.

The following committee was appointed: Drs. E. Eliot Harris, chairman, Julius C. Bierwirth, Alexander Lambert, Parker Syms, and Wisner R. Townsend.

Bearing on this matter is the action of the committees appointed by the Cortland County Medical Society and Cortland County Medical Association, held September 4, when the following resolution was adopted:

Whereas, About 35 or 40 per cent. of the members of the Cortland County Medical Society are members of both the society and association.

Resolved, That we believe that we express the sentiment of nearly all the profession of the county in the desire for the harmonious union of the two medical organizations of the state, since we believe our influence and power in the state in obtaining medical legislation and preventing the enactment of harmful laws, would be greatly enhanced thereby, and we recommend that all proper measures be taken to bring about this end.

The committee for the Cortland County Medical Society consisted of Drs. F. W. Higgins, H. T. Dana and J. W. Whitney.

The committee for the Cortland County Medical Association consisted of Drs. S. J. Sornberger, C. D. Ver Nooy, and F. D. Reese.

Book Notices.

Consumption a Curable and Preventable Disease. What a Layman Should Know About It. By Lawrence F. Flick, M.D., Founder of the Pennsylvania Society for the Prevention of Tuberculosis. Cloth. Pp. 295. Price, $1.00. Philadelphia: David McKay. 1903.

This little volume is, as its title indicates, an attempt to instruct the laity in regard to this disease of which the public as well as the profession have of late years heard so much. There has been an immense amount of literature and a considerable amount of misconception on the subject. This work is intended to correct the latter and to give a fair and unexaggerated view of the disorder and its prevalence. It is a little difficult to steer clear of the popular and professional tuberculophobia on the one hand and of too great laxity as regards the real peril of the disease on the other. On the whole we think Dr. Flick has taken a judicious middle course. Any one who reads his book through ought to have at its close a fairly well-balanced mind as regards the dangers and the possibilities of tuberculosis. Reading a special chapter alone would not be sufficient. Dr. Flick evidently takes the view that there is a decided difference between bovine and human tuberculosis and that the dangers of ingestion of tubercle bacilli in meat and milk are not by any means as great as held by some authors. We would not say, however, that he encourages an absolute lack of precautions in this respect. The point he makes is that the experiments that have been made have been persistent, animals have been continuously fed on tubercles and every possibility for the contraction of the disease has been employed, whereas in the ordinary use of meat and milk as done by the human species in the ordinary course of life, the conditions are quite different. He says that perhaps the strongest argument that may be advanced against the view that meat and milk are sources of the seed supplied for human tuberculosis is found in clinical experience. No indisputable case in which human tuberculosis has been thus contracted has been put on record. Of course, this is a matter of individual judgment, but we ourselves doubt whether any of the reported cases will stand a searching criticism if other possibilities of infection were thoroughly excluded. The book is very neatly gotten up, nicely printed, of convenient size and should do good.

A Text-Book of Pathology. By Alfred Stengel, M.D., Professor of Clinical Medicine in the University of Pennsylvania. With 394 Text Illustrations, Many in Colors, and 7 Full-page Colored Plates. Cloth. Pp. 933. Price, $5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

This work appeared first in September, 1898. The favor with which it has been received by the profession is well shown by the fact that it has reached its fourth edition in less than five years. In this fourth edition the most important changes and additions to be noted are found in the chapters on the bacterial diseases and immunity and allied processes. The enormous amount of work being done in this line throughout the world is constantly adding to our knowledge and makes the frequent revision of text-books necessary. In this volume the above-mentioned subjects have been brought up to date, and the various theories of immunity, especially Ehrlich's side-chain theory, are clearly set forth. Mention is also found of the recent work of Reed and Carroll on yellow fever. Not the least important addition to be noticed is an appendix of about forty pages on pathologic technic. This includes examination of fresh specimens; methods of hardening and staining special tissues; blood stains and bacteriologic examinations. It adds materially to the value of the work as a whole, which is an excellent one and can be recommended.

High-Frequency Currents in the Treatment of Some Diseases. By Chisholm Williams, F.R.C.S. Edin., M.R.C.S. Eng. Cloth. Pp. 222. Price, $2.75 net. London and New York: Rebman, Ltd. 1903.

This is an English work on electrotherapy. The author started, as he says, with some skepticism as to the value of these currents, but after an extensive trial became convinced of their great usefulness in some cases. The book is largely made up of a description of the apparatus. The diseases in which he has found the treatment beneficial are briefly noticed at the end and include diabetes, gout, chronic rheumatism, obesity, hysteria, anemia, chlorosis, neurasthenia and pulmonary tuberculosis. The latter is treated of at considerable length, and he finds this treatment of marked benefit. He is strongly of the opinion that the application or use of these currents in tuberculosis sanitaria will greatly increase the number of cures. Dyspepsia is also discussed at some length. Among local diseases he mentions lupus, both of the tubercular and erythematous types, eczema, sciatica, headache, etc., and malignant growths.

Lessons in Disinfection and Sterilization. An Elementary Course of Bacteriology, Together with a Scheme of Practical Experiments Illustrating the Subject-matter. By F. W. Andrewes, M.A., M.D. Oxon., F.R.C.P. Lond., D.P.H. Cantab., Lecturer on Pathology, Pathologist and Sanitary Officer to St. Bartholomew's Hospital, London. Cloth. Pp. 222. Price, $1.05. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co. 1903.

We have experienced considerable satisfaction in the perusal of this little work, which is a remarkably clear and readible statement of the general facts in regard to sterilization and disinfection. As the author says, it will probably be of some service, not only to nurses but also to practitioners who have not had the opportunity for a regular course in bacteriology. While it does not cover the ground as fully and in details as does the work of Rosenau, it is a convenient and concise statement of the general methods of disinfection and also gives some accounts of the bacteria concerned in infection, full enough indeed to meet the ordinary wants of the general practitioner for information on these subjects. The book is one that may be recommended.

Protozoa and Disease. By J. Jackson Clarke, M.B. Lond. Cloth. Pp. 177. Price, $2.50 net. New York: Wm. Wood & Co. 1903.

While this book has only recently appeared and is perhaps the best available account of animal disease-producing organisms that we have at the present time, the progress in this line has been so rapid that we find many subjects are omitted. Still, it is an excellent little treatise and can be recommended. The book is well illustrated, well written and will be valuable for ready consultation by pathologic workers and others.

An English Handbook of the Paris Medical School. By A. A. Warden, M.D., Visiting Physician to the Hertford British Hospital, Paris. With Prefatory Letters by Lord Lister and Prof. W. W. Keen. Paper. Pp. 72. Price, 2s. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co. 1903.

Physicians proposing to visit Paris to see clinical work will find this little book of considerable value. It gives the location of the various public and private hospitals, and tells how to reach them; gives a list of the attending physicians and surgeons and hours of attendance; also information in regard to the practice of medicine in France, and in regard to other matters of special interest to medical men visiting the French capital.

Association News.

List of new members for the month of September, 1903:

ARIZONA.

Tyroler, Adolph, Williams.

ARKANSAS.

Crutcher, William, Pine Bluff.
Donnell, R. A., Malvern.
Johnson, R. F., DeQueen.
Hayes, Sr., John W., Eureka Springs.
Logan, B. C., Mirrilton.
Rowland, W. T., Arkadelphia.

CALIFORNIA.

Bloch, Herbert I., San Francisco.
Cunnane, W. B., Santa Barbara.
Emerson, Mark L., Oakland.
Macleish, A. L., Los Angeles.

DISTRICT OF COLUMBIA.

Durfee, R. B., Washington.

FLORIDA.

Mixson, J. F., Otter Creek.
McKuistry, J. F., Gainesville.

GEORGIA.

Denson, E. J., Allentown.
Charon, Thomas, Donalsonville.
McLain, C. F., Calhoun.

ILLINOIS.

Hamilton, C. L., Dwight.
McCauley, Lee, Brussels.
Simpson, J. P., Palmer.
Falker, William H., Chicago.
Strawn, Julia C., Chicago.
Purviance, W. E., Chicago.
Wenstrand, E. W., Chicago.

INDIAN TERRITORY.

Watson, Frank L., Alderson.

INDIANA.

Goar, Charles S., Indianapolis.
Green, T. G., Shelbyville.
Pugh, F. H., Williamsport.

IOWA.

Barfoot, A. F., Decorah.
Henderson, Edgar B., Marengo.
McClellan, W. S., Morning Sun.
Pruitt, George A., Blanchard.
Roberts, France C., Ft. Madison.
Savre, L., Osage.
Scanlan, Maurice. DeWitt.
Wescott, L. A., Cherokee.
Wilson, J. Miller, Colfax.

KANSAS.

Weaver, A. J., Concordia.

KENTUCKY.

Cohn, Seldon, Fulton.
Taylor, B. M., Greensburg.
Adams, Jesse J., Munfordville.
Bate, R. A., Louisville.
Buchanan, J. B., Campbellsville.
Bruce, F. Edward, Elkton.
Bryant, Sarah Felt, Hardyville.
McCauley, W. C., Versailles.
Robinson, W. B., Corinth.
Stine, Frederick A., Newport.
Wilson, John E., Falmouth.

LOUISIANA.

Cooper, John H., Welsh.
Hoffpauer, M. L., Crowley.
Marable, Augustus, Vidalia.
McGoldrick, James, Coushatta.
Worley, P. C., Gilliam.

MAINE.

Baker, Clarence A., Portland.
Butler, Harry, Bangor.
Foss, C. W. P., Brunswick.

MASSACHUSETTS.

Holland, H. T., Boston.
Spear, Edmund S., Boston.
Conroy, Peter J., Everett.
Schneider, J. P., Palmer.
Shanahan, T. J., Brookline.

MICHIGAN.

Huizinga, Thomas G., Zeeland.
Wilton, Albert H., Tompkins.
Derck, W. P., Marysville.
Westrate, Paul, Grand Rapids.
Abbott, Arthur W., Ludington.
Attridge, J. A., Detroit.
Berry, H. G., Mount Clemens.
Brady, Emory J., Constantine.
Campbell, E. R., Flint.
Curnalia, C. C., Roscommon.
Drake, W. M., Breckenridge.
Gleason, S. W., Greenville.
Hartley, Sophie M., Ann Arbor.
Larson, C. F., Crystal Falls.
McColl, John A., Grand Rapids.
Macleod, A. G., Calumet.
McLennan, H. E., Bay Mills.
McMeekin, James W., Saginaw.
Main, John T., Jackson.
Moore, J. R., Ironwood.
MacDonald, N. S., Hancock.
Thompson, A. B., Grand Rapids.
Wilbur, E. P., Kalamazoo.

MISSISSIPPI.

Bright, Ira B., Greenwood.
Cooper, B. D., Duncan.
Fahnestock, E. Morris, DeLisle.
Hall, Andrew J., Natchez.
Harrison, L. D., Clarksdale.
Hitt, Joseph P., Clayton.
Jones, T. M., Hernando.
Phillips, George C., Lexington.

MISSOURI.

Bedel, Adelheid C., St. Louis.
Bristol, B. J., St. Louis.
Davis, Wheeler, St. Louis.
Heyer, Charles, St. Louis.
Jordan, A. P., St. Louis.
Nietert, H. L., St. Louis.
Taussig, F. J., St. Louis.
Allen, F. W., Callao.
Bland, Warren H., Vandalia.
Coon, D. W., Trenton.
Farrow, Geo. Wyatt, East Lynne.
Jensen, N. N., Florissant.
Lionberger, J. R., Boonville.
Matthews, F. H., Liberty.
Musson, Edwin H., Rockingham.
Myer, Max W., Columbia.
Parrish, J. C., Vandalia.
Shy, Milton P., Knob Noster.
Smith, Charles W., Keota.
Smith, Ira, Austin.
Winchester, Albert N., Joplin.

NEBRASKA.

Creighton, E. A., Red Cloud.
Curtis, W. L., South Omaha.
Dandy, George B, Omaha.
Dillon, J. H., Auburn.
Faulk, F. W., South Omaha.
Flynn, P. J., O'Neill.
Haslam, George J., Fremont.
Horton, C. J., Grand Island.
Johnson, John F., Fullerton.
Johnson, Frank W., Fullerton.
Judkins, D. M., Fullerton.
Mason, Rufus D., Omaha.
Morsman, C. F., Strong.
Overgaard, Andrew P., Fremont.
Ruge, E. C., Springfield.
Schindel, R. E., South Omaha.
Shaw, L. M., Osceola.

NEW HAMPSHIRE.

Dearborn, S. S., Nashua.
Grafton, F. W., Concord.
Guillet, Noel E., Manchester.
Hoitt, George B., Manchester.
Murray, John T., Manchester.
Shea, Augustus W., Nashua.

NEW JERSEY.

Bennett, R. S., Asbury Park.
Franklin, G. H., Hightstown.
Grim, F. S., Baptisttown.
Lewis, Alfred A., Morristown.
Smith, John F., Salem.
Sharp, Ezra B., Camden.
Voelbel, Benjamin H., Vailsburgh.
Warden, Albert H., Weehawken.

NEW MEXICO.

Lane, Samuel M., Silver City.

NEW YORK.

Allen, S. B., New York City.
Leale, Medwin, New York City.
Woodend, Wm. E., New York City.
Baker, Eugene, Ithaca.
Jones, C. S., Buffalo.
Soch, A. F., Fredonia.
Swetland, B. S., Brocton.
Vidal, J. E., Stapleton.

NORTH DAKOTA.

Saylor, H. L., Cogswell.

OHIO.

Cozad, H. I., Akron.
Pitzele, W. A., South Lorain.
Zinninger, G. F., Canton.

OKLAHOMA.

Palmer, T. D., Ingersoll.

PENNSYLVANIA.

Babcock, W. W., Philadelphia.
Davisson, A. H., Philadelphia.
Kremer, Walter H., Philadelphia.
Metheny, D. G., Philadelphia.
Newmayer, S. W., Philadelphia.
Silver, David, Philadelphia.
Wetherill, H. E., Philadelphia.
Bartilson, B. M., Braddock.
Cahall, W. C., Germantown.
Donaldson, L. DeH., Canonsburg.
Gardner, C. B., Johnstown.
Miller, C. L., Lebanon.
Wolfe, Mary M., Norristown.

RHODE ISLAND.

Flanagan, W. F., Providence.
Packard, Mary S., Providence.

SOUTH DAKOTA.

Squire, H. A., Spearfish.

TENNESSEE.

Bennett, B. T., Trenton.
Hall, S. B., Clinton.

TEXAS.

Calhoun, B. F., Beaumont.
Ball, W. P., Cleburne.
Gage, S. C., Ennis.
Lemert, R. H., Brenham.
Moore, H. L., Van Alstyne.
Nicks, J. M., Stone City.

WASHINGTON.

Mead, C. A., Everett.
Neville, E. C., Seattle.

WEST VIRGINIA.

Camden, Rolla, Parkersburg.
Keever, L. F., Parkersburg.
McMillan, Wm. A., Charleston.
Ogden, C. R., Clarksburg.
Wise, S. D. H., Parkersburg.

WISCONSIN.

Meachem, J. G., Racine.
Nelson, S. B., Oshkosh.
Jobse, P. H., Milwaukee.
Akerley, A. W. K., Milwaukee.
Rheingans, G. H., South Germantown.
Lehnkering, C. F., Darlington.

FRANCE.

Spaulding, J. H., Paris.

Societies.

COMING MEETINGS.

Tri-State Medical Society of Alabama, Georgia and Tennessee, Oct. 13-15.

Vermont State Medical Society, Bellows Falls, Oct. 15-16.

New York State Medical Association, New York City, Oct. 19-22.

Congress of State and Provincial Boards of Health of North America, Baltimore, Oct. 23-24.

American Public Health Association, Washington, D. C., Oct. 26-30.

Hawaiian Territorial Medical Society, Honolulu, Nov. 7.

Oklahoma Territory Medical Association, Oklahoma City, Nov. 11.

Wayne County (Ind.) Medical Society.—At its regular session in Richmond, September 3, the society adopted a new constitution by an almost unanimous vote.

Vermont State Medical Society.—The nintieth annual meeting will be held at Bellows Falls, October 15 and 16, under the presidency of Dr. Edmund M. Pond, Rutland.

Crawford County (Iowa) Medical Society.—Physicians of Crawford County met at Denison, September 11, and organized a county medical society, with Dr. George S. Waterhouse, Charter Oak, president, and Dr. Andrew Randall, secretary.

Washburn-Sawyer-Burnett County (Wis.) Medical Society.—The first annual meeting was held at Spooner, September 8. Dr. John B. Trowbridge, Hayward, was elected president; Dr. Joseph P. Cox, Spooner, vice-president, and Dr. E. Rudolph Herring, Shell Lake, secretary and treasurer.

Chicago Medical Society (Southern District).—At the annual meeting of this branch of the Chicago Medical Society, September 30, Dr. Edward B. Hutchinson was elected president; Dr. O. Paul Chester, vice-president; Dr. Winfield S. Harpole, secretary, and Dr. Charles P. Pinckard, treasurer.

Northern California and Southern Oregon Medical Association.—Physicians met at Cedarville, Cal., August 28, and organized this association, with the following officers: Dr. Herbert T. Risdon, Alturas, Cal., president; Dr. R. E. Lee Steiner, Lakeview, Ore., vice-president; Dr. Hilderbrand, Cedarville, Cal., secretary, and Dr. Alexander Gibson, Alturas, Cal., treasurer.

Bi-Parish (Natchitoches and Red River, La.) Medical Society.—This society was organized at Coushatta, September 15, and the following officers elected: Dr. Clarence E. Edgerton, Coushatta, president; Drs. Samuel H. Scruggs, Cloutierville, and W. F. Sibley, Robeline, vice-presidents; Dr. Hendricks, East Point, secretary, and Dr. James McGoldrick, Coushatta, treasurer.

Cole County (Mo.) Medical Society.—This society was organized at Jefferson City, September 17, with 17 members, with the following officers: Dr. Robert E. Young, president; Dr. Jefferson L. Thorpe, vice-president; Dr. Gustave Ettmueller, secretary; Dr. William A. Clark, treasurer, and Dr. Charles P. Hough, delegate to the Medical Association of the State of Missouri, all of Jefferson City.

Jasper-Newton County (Texas) Medical Society.—Physicians of Jasper and Newton counties recently organized a medical society with the following officers: Dr. Hardy R. Hancock, Jasper, president; Dr. Jefferson D. Yates, Kirbyville, vice-president; Dr. Thomas E. Stone, Jasper, secretary and treasurer, and Drs B. F. Yates, Jefferson D. Yates, Jasper, and G. P. Sutton, Burkeville, censors.

Brunswick County (N. C.) Medical Society.—Dr. Frank H. Russell, Wilmington, councilor for the Third District, organized a county medical society at Southport, September 18, on the plan recommended by the American Medical Association. The following officers were elected: President Dr. Erastus G. Goodman; vice-president, Dr. Walter G. Curtis, Southport, and Dr. J. A. Dosher, Southport, secretary and treasurer.

Putnam County (Ohio) Medical Society.—The physicians of the county met recently at Ottawa and organized a county medical society with the following officers: Dr. John C. McClung, Leipsic, president; Dr. C. F. Douglas, Kalida, vice-president; Dr. Wiley D. Hickey, Leipsic, secretary; Dr. Warren F. Reed, Ottawa, treasurer, and Drs. Charles E. Beardsley, Ottawa, Harry A. Lewis, Continental, and Alva L. Paul, Ottawa, censors.

Wright County (Iowa) Medical Society.—Dr. Charles H. Churchill, Fort Dodge, councilor for the Tenth District, met the physicians of the county at Eagle Grove, September 11, and assisted in the organization of a county medical society. Dr. Joseph H. Sams, Marion, was elected president; Dr. James W. Garth, Clarion, vice-president; Dr. E. D. Thompson, Eagle Grove, secretary and treasurer, and Dr. W. C. McGrath, Eagle Grove, censor.

Sioux County (Iowa) Medical Society.—Dr. Edward E. Dorr, Des Moines, councilor for the Seventh District, met fifteen physicians of the county at Alton, September 10, and organized a county medical society on the plan recommended by the American Medical Association. Dr. Albert De Bey, Orange City, was elected president; Dr. Ferdinand J. Smith, Alton, vice-president, and Dr. C. S. McCarty, Hawarden, secretary and treasurer.

Shelby County (Mo.) Medical Society.—Members of the old county society recently reorganized the society and elected the following officers: Dr. William Carson, Shelbyville, president; Dr. J. D. Smith, Shelbina, vice-president; Dr. L. W. Dallas, Hunnewell, secretary and treasurer; Drs. Frank K. Roy, Hagers Grove, Adolphus G. Wood, Lentner, and W. W. Owen, Oakdale, censors, and Dr. William Carson, delegate to the Medical Association of the State of Missouri.

Carroll County (Iowa) Medical Society.—The physicians of the county met with Dr. Charles H. Churchill of Fort Dodge, councilor for the Tenth District, at Carroll, September 15, and organized a county medical society with the following officers: Dr. J. Jordan Deshler, Glidden, president; Dr. Albert S. Gockley, Carroll, vice-president; Dr. Alois Kessler, Carroll, secretary-treasurer, and Drs. Robert R. Williams, Manning, Johan B. H. Feenstra, Arcadia, and Bernard C. Kelley, Carroll, censors.

Juneau County (Wis.) Medical Society.—At a meeting of the physicians of the county held in Elroy, September 10, a medical society was organized with the following officers: Dr. John B. Edwards, Mauston, president; Dr. Robert W. Hoyt, New Lisbon, vice-president; Dr. Arthur T. Gregory, Elroy, secretary and treasurer; Dr. Eugene H. Townsend, New Lisbon, delegate to the Wisconsin State Medical Society, and Drs. Charles S. Smith, Elroy, James E. Smith, Mauston, and Charles H. Golden, Wonewoc, censors.

Tri-Parish (La.) Medical Society (Claiborne, Webster and Bienville).—This society met at Arcadia, September 17. Drs. Francis M. Thornhill, Arcadia, James C. Willis, Homer, and Joseph E. Knighton, Homer, were appointed a committee to revise the constitution and by-laws so as to conform to those of the state society. The report of this committee and the question of applying to the state society for a charter will be discussed at the next regular meeting, which will be held at Homer on the second Thursday in January, 1904.

Jefferson County (Wis.) Medical Society.—About 20 physicians of the county met at Jefferson, September 8, and organized a county medical society, adopting the constitution and by-laws recommended by the American Medical Association. The following temporary officers were elected pending the granting of a charter: Dr. William W. Reed, Jefferson, president; Dr. C. E. Lauder, Johnson Creek, secretary and treasurer, and Drs. Carl R. Feld, Watertown, William A. Engsberg, Lake Mills, and Urban P. Stair, Fort Atkinson, censors.

Organization in Louisiana.—Dr. J. M. Barrier, Delhi, president of the Louisiana State Medical Society, has begun a series of tours through the principal unorganized parishes of the state in the interest of medical organization. The physicians of these parishes are being circularized in advance The first organization meeting of this series was held at Winsboro, Franklin Parish, September 24, when the Franklin Parish Medical Society was organized. There are now about 20 out of a total of 59 parishes, and applications for charters are coming in briskly.

Newaygo County (Mich.) Medical Society.—Dr. Bartlett H. McMullen, Cadillac, councilor for the Ninth District, met the physicians of the county at Newaygo, September 10, and organized a county medical society to be in affiliation with the state and national organizations. The following officers were elected: Dr. Nicholas De Haas, Fremont, president; Dr. William H. Barnum, Fremont, vice-president; Dr. F. Holmes Brown, Newaygo, secretary; Dr. Charles Whitehead, Newaygo, treasurer, and Drs. Fred Yonkers, Woodville, Morey L. Teeple, Grove, and Drummond Grant, censors.

Montgomery County (Texas) Medical Society.—Dr. John T. Moore, Galveston, councilor for the Ninth (South Texas) District, met the physicians of the county at Conroe, September 14, and organized a county medical society on the plan recommended by the American Medical Association, with an initial membership of 12 and the following officers: Dr. William P. Powell, Willis, president; Dr. Henry W. Waters, Montgomery, vice-president; Dr. Juriah F. Collier, Conroe, secretary and treasurer, and Drs. R. Walter Smith, Clinesburg, George W. Stevens, Willis, and William N. Hooper, Conroe, censors.

Dane County (Wis.) Medical Society.—Dane County medical men met in the senate chamber, Madison, September 17, and organized a county medical society with the following officers: President, Dr. Cornelius A. Harper, Madison; vice-president, Dr. William F. Pinkerton, Mazomanie; secretary and treasurer, Dr. Reginald H. Jackson, Madison; censors, Drs. J. C. Cutler, Verona, Charles S. Sheldon, Madison, and Daniel B. Collins, Madison. A committee composed of Drs. Charles S. Sheldon, Theodore W. Evans and Mila B. Sharpe, all of Madison, was appointed to consider the adoption of the constitution and by-laws recommended by the American Medical Association.

South Dakota (Mitchell District) Medical Society.—The physicians of the Mitchell District, comprising Douglas, Hanson, West Hutchinson, West McCook, West Turner, South Sanborn, Jerauld, Buffalo, Aurora, Brule, Lyman and Davison counties, met, September 24, at Mitchell, for the purpose of reorganizing along the lines suggested by the American Medical Association. Sixteen members were present and applications had been received from thirty-seven physicians within the district. Officers were elected as follows: President, Dr. John W. C. White, Plankinton; vice-president, Dr. Bert Menser, Bridgwater; secretary, Dr. E. Frank Reamer, Mitchell; treasurer, Dr. Charles A. Bower, Mitchell, and censors, Drs. George A. Clousen, Bridgewater, Orville D. Pharon, Emery, and Roscoe H. Goodrich, Chamberlain. The next meeting will be held at Chamberlain in December.

Medical and Chirurgical Faculty of Maryland.—At the semi-annual meeting of the Medical and Chirurgical Faculty of Maryland, held at Blue Mountain House, September 24 and 25, the president presented some interesting statistics regarding the public medical libraries of Baltimore. Dr. Charles Wardell Stiles, Boston, read a paper on the dwarf tapeworm, *Hymenolepsis nana*, a new species infecting man, of which about 100 cases have been found in this country. The symptoms are similar to those in the other forms, and the only efficient remedy discovered is the male fern. An eloquent address was made by Dr. J. N. McCormack, Bowling Green, national organizer of the American Medical Association, on the advantages of organization of the profession, and a committee of nine was appointed to report the necessary changes in the constitution. Dr. D. W. Cathell, Baltimore, read a paper in which he praised the wisdom of the change from the code of ethics made at New Orleans, and predicted that the homeopaths would become merged in the regular profession by it, to the great advantage of the latter. Dr. Guy L. Hunner, Baltimore, reported 35 cases of tuberculosis of the urinary system in women, showing, contrary to the usual opinion, that it is more frequent in the upper part of the tract (kidney and ureter) than in the lower (bladder). Diagnosis is often obscure. The results of surgical treatment are very encouraging. Dr. J. McPherson Scott, Hagerstown, read a paper on "Needed Amendments in the Medical Practice Act," and a committee of eleven was appointed to report on the subject at a special meeting to be held at Baltimore, November 15.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Sixteenth Annual Meeting, held in Chicago, Sept. 22-24, 1903.

(Continued from page 872.)

Acute Perforated Gastric Ulcer.

Dr. H. Howitt, Guelph, Ont., presented a paper on this subject. Acute gastric ulcer perforation, as understood by him, refers to those cases in which Nature fails to prevent the escape of gas, liquid or other contents of the stomach by adhesion of the part to adjacent structures. He believes that the diagnosis should be made without difficulty when the perforation occurs in a young, anemic girl, whose previous history indicates the presence of an ulcer. Diagnosis should not be difficult in the majority of the other cases, for there is generally a history of gastric distress after meals, and frequently other symptoms to indicate the trouble. Sudden intense pain in the epigastrium, pronounced shock, rigidity of the abdominal wall and the thoracic character of the respiratory movements aid in arriving at a correct conclusion; and, if in addition to these the initial pain radiates in a certain direction, and the position of greatest suffering changes and gradually takes a downward course in the abdomen, the diagnosis may be made without delay. In the rare instances of rupture of the gall bladder or perforation of the duodenum in which the symptoms closely resemble those of gastric perforation, the indications for prompt surgical treatment are practically the same. In perforation of the anterior wall to the left of the median line, the material, and consequently the pain, follows a course along the inner side of the descending colon. In all other situations they follow along the descending colon toward the pelvis.

Morphia before a diagnosis has been made often prevents timely recognition and prompt action. Until the general practitioner becomes more familiar with the true import of the initial symptoms successful operations will not be common.

Symptoms indicate the position of the ulcer in the stomach definitely enough for all practical requirements. Before perforation takes place, when the ulcer approaches the peritoneal coat, a local sensitive area of peritonitis is produced, and it is very sensitive to pressure or other form of irritation. Hence the posture of the patient is that which avoids pressure and keeps the contents of the stomach away from the ulcer. For instance, when the ulcer is on the anterior wall, the patient is more comfortable when lying on the back, and so on. When it is on the anterior wall, point pressure of a superficial character may, by causing severe pain, indicate the exact position. The pain, when severe, tends to radiate in certain directions, according to the position of the ulcer. If near the pylorus and on the anterior wall, to the right, or to the right and downward. On other parts of the anterior wall, to the left and to the left and upward to shoulder. On posterior wall, to back immediately behind its situation and to right or left, according to whether it is right or left of spinal column, and upward to interscapular space. A large incision, collapse of the distending coils of intestines by temporary enterotomy and evisceration render the work easy and more expeditious, and with less damage to the delicate parts than is possible by any other method. When the perforation is large, drains are used in each flank, and in the pelvis, not through a large incision, but through separate stabs.

Beside a brief synopsis of each of his former operations already reported, the paper contains a report of his fourth case, in which the perforation was on the anterior wall. It was closed with fine silk suture. His method of sight inspection and flushing of all parts of the abdomen and pelvis with a large forcible stream and drainage was carried out. The patient recovered and is well to-day.

DISCUSSION.

Dr. C. H. Mayo, Rochester, Minn., said that he and his brother had had several cases of perforating gastric ulcer of the type described. Their experience had been that there was about an even number of perforations in the pyloric region of the stomach; also in the first portion of the duodenum, and that the symptoms and results were about the same in either position. The character of the ulcer was about the same. In the stomach perforations, as a rule, the chronic irritation had been of such a nature that it was almost impossible to close the perforation.

Dr. John B. Murphy said the proper time to operate on perforating gastric ulcer was before the peritoneum had been irreparably injured. This may not be the first day. Many times the stomach is not full when perforation occurs. Furthermore, the stomach contents are less septic and less irritating than those of any other portion of the alimentary canal, therefore the time may be longer in perforating gastric ulcer than in typhoid perforation.

Should the Uterus and Ovaries Be Removed in Operating for Double Pyosalpinx?

Dr. C. C. Frederick, Buffalo, N. Y., read a paper on this subject. He first briefly reviewed the history of operative procedures. After an experience of about fifteen years with the various surgical procedures gynecologists are in a position to decide accurately the amount of pain, discomfort and illness due to disease of the various anatomic parts of the woman's sexual apparatus. It is not necessary to sacrifice all of these organs when they are not all hopelessly diseased. The duty of the gynecologist is to afford his patient the greatest possible relief from her symptoms with the least mutilation, and the preservation of every organ possible to enhance the most perfect performance of all bodily functions. As much of the healthy ovarian tissue as possible should be left if it be only the eighth part of an ovary. If the condition is known to be tubercular, the uterus should certainly be removed. But even if both tubes and uterus are taken out all the ovarian tissue possible should be saved. The uterus should not be removed if it can be retained.

DISCUSSION.

This paper was discussed by Drs. Robert T. Morris, Rufus B. Hall, Walter B. Dorsett, Miles F. Porter, Byron Robinson, W. D. Haggard, Albert Goldspohn, E. C. Dudley, J. H. Carstens, Frederick Blume, John B. Murphy and Charles L. Bonifield, all of whom favored the conservation of as much ovarian tissue as possible in operating for pyosalpinx.

The Indications and Technic of Vaginal Drainage for Suppuration in the Pelvis.

Dr. Albert Goldspohn, Chicago, discussed the chief routes by which infection enters the female pelvis and described the type of pathologic changes resulting from each route. While pelvic cellulitis is rare and of little significance in non-puerperal infections, via the tubes, it is the leading or primary anatomic change in puerperal infections, via the lymphatics. When vaginal evacuation of the pus in pelvic suppuration needs to be followed by a more radical secondary operation, in many cases it enables the inflammation in the associated uterus or tubes, or ovaries, to subside during the interval, so that they need not be removed, as would have been deemed necessary if a radical operation had been performed in the first instance or during the acute stage. Vaginal drainage helps to save life in cases that have become too feeble for a radical procedure to be applied at once. Preliminary drainage improves their condition so that they can stand a radical operation later, with no higher rate of mortality than obtains after abdominal section in other cases that are not so reduced. This operation should never be a puncture with a trocar, knife or scissors, but always a transverse incision into the posterior cul-de-sac, preferably with the thermocautery. From this entrance, as a vestibule, laterally located purulent accumulations, if not yet opened, are best attacked by a finger assisted by forceps. Only a small proportion of the cases so treated by him have required another operation, except when the infection was from the vermiform appendix.

DISCUSSION.

Dr. Edward J. Ill said he began to use vaginal drainage fifteen years ago, and while he was not opposed to this peculiar method, long experience had taught him there were better methods. Cases of cellulitis should be opened from below, if possible, and the sooner the better. But the drainage of tubal and ovarian abscesses is different and is by no means curative.

Dr. D. Tod Gilliam said that unless cellulitis existed he did not think there was justification for vaginal drainage.

Dr. H. W. Longyear, Detroit, said that to get rid of pus in the cellular tissue there was no question about the propriety of vaginal drainage. Further, if a woman is *in extremis* from long-continued suppuration and prolonged fever, and can not stand a radical operation, the pus should be drained at first through the vagina, but this measure should not take the place of a radical operation later.

Dr. J. Henry Carstens, Detroit, agreed with Dr. Longyear.

(*To be continued.*)

PENNSYLVANIA STATE MEDICAL SOCIETY.

Fifty-third Annual Meeting, held at York, Sept. 22 to 24, 1903.

The meeting was called to order by the president, Dr. William M. Welch, Philadelphia, and addresses of welcome were delivered by Mayor M. B. Gibson of York and Dr. N. C. Wallace, president of the York County Medical Society.

Professional Ethics.

Dr. J. N. McCormack, Bowling Green, Ky., national organizer of the American Medical Association, delivered an address on this subject, in which he lamented the animus so frequently shown by physicians toward other practitioners. He detailed the plan of organization recommended by the American Medical Association and made a plea for clean physicians, physically, morally and mentally.

Misleading Text-Books.

The committee appointed to examine school text-books on physiology and hygiene reported as follows:

> The school text-books on physiology and hygiene contain many errors and much misleading information and very serious omissions. The books, as a whole, can r [illegible] lthough some few are good. We are sorry t [illegible] y that the books supervised by the Woman's [illegible] Union committee are the most reprehensible.
>
> If the object of the woman's committee is the teaching of *prohibition*, then let them openly and honorably designate their books by *truthful titles*, and not resort to the contemptible *method* of using a scientific term to cloak an ethical principle.
>
> It is evident to any fair-minded observer that while a g[illegible]in of *strychnia is a poison*, the one-hundredth part thereof is *not*. It is absurd to teach that cider, beer, wine, etc., in any dose is a poison, whereas, we all know that a tumbler of pure alcohol is. This is but the morbid expression *of fanatics*, who are guided by zeal rather than by wisdom.
>
> The committee recommends that a committee be appointed to consider the advisability of *state supervision* of the school text-books pertaining to *anatomy*, *physiology*, hygiene and all allied subjects.

The Orations.

The address in surgery was delivered by Dr. William L. Estes, South Bethlehem, who urged the necessity for keen discrimination between operable and inoperable cases.

The address in obstetrics was delivered by Dr. John G. Clark, Philadelphia.

The address in hygiene and state medicine was delivered by Dr. Seneca Egbert, Philadelphia, in which he stated that the population of the districts in the United States in which a system of mortality registration had been organized had increased from 19,659,440 in 1890 to 28,807,269 in 1900, with a decrease in the death rate in the registration areas from 19.6 to 17.8 per 1,000. He forcibly demonstrated the value of improved sanitary regulations, such as purification of the water supply, supervision of milk and food, quarantine regulations, etc., and dwelt at considerable length on the value of preventive measures in contagious and infectious diseases.

The address in neurology was delivered by Dr. Charles B. Mayberry, Retreat, Pa., in which he considered the means of securing better results in the treatment of the insane, which he believed would result from the carrying out of the following suggestions: 1. More extensive instruction in psychiatry, both didactic and clinical. 2. The construction of small psychopathic hospitals for the separate treatment of the acute curable insane. 3. The organization of a system of out-patient departments by which the discharged patients may be kept under observation for one year after leaving the institution. 4. The creation of a central laboratory for the investigation of the pathologic conditions underlying mental disease.

The address in ophthalmology was delivered by Dr. E. B. Heckel, Pittsburg. He said that the drugs which were used twenty-five years ago, e. g., mercury, nitrate of silver and atropin, stand out prominently in optical therapeutics to-day, the advance consisting in the new and improved methods of using them. The treatment of glaucoma, he stated, had made but little progress and iridectomy was still to be preferred to sympathectomy, massage being a valuable adjunct, and cytology, while it has been used but a short time, gives indications of good results in sympathetic ophthalmia.

The address in medicine was delivered by Dr. H. M. Neale, Upper Lehigh, who believes the most important therapeutic factors in the treatment of pulmonary tuberculosis are fresh air, sunlight, rest and cleanliness in conjunction with proper food and careful medical supervision. He believes that cures can be effected as well at home as in the higher altitudes. He describes in detail the method of treatment at the White Haven Sanitarium, one of the important factors being large quantities of milk and eggs. In addition, internal doses of creosote and iodin compounds, and inunctions of olive oil, wintergreen oil and other oils are administered.

Social Features.

At the Tuesday evening session the president's annual address was delivered by Dr. William M. Welch, Philadelphia, after which the society was given a reception at the Country Club by the York County Medical Society.

Wednesday afternoon the society visited the York Water Plant, where an address was delivered by Mr. George W. Fuller, New York, on the subject of "Water Filtration," followed by a reception given by the York Water Company at the Country Club, and in the evening a theater party given by the York County Medical Society.

Thursday evening the members were given an automobile excursion to the Penn Park musical entertainment, and on Friday morning an excursion to the Gettysburg battlefield.

The New Officers.

The following officers were elected: President, Dr. William B. Ulrich, Chester; vice-presidents, Drs. Isaac C. Gable, York; Philip Y. Eisenberg, Norristown; Fred W. Coover, Harrisburg; William A. Marsh, Mt. Pleasant: secretary, Dr. Cyrus Lee Stevens, Athens; assistant secretary, Dr. Theodore B. Appel, Lancaster; treasurer, Dr. George W. Wagoner, Johnstown; board of trustees, term ending 1906, Drs. Richard Armstrong, Lock Haven; Isaac C. Gable, York, and William S. Ross, Altoona; delegates to the American Medical Association, Drs. George W. Guthrie, Wilkesbarre; William S. Foster, Pittsburg; Alex. R. Craig, Columbia; Webster B. Lowman, Johnstown; alternates, Drs. Walter Lathrop, Hazleton; John B. Donaldson, Canonsburg; William M. Guilford, Lebanon; James N. Richards, Fallsington; Samuel Wolfe, Philadelphia; James H. Montgomery, Erie; Erasmus V. Swing, Chester, and William M. Beach, Pittsburg.

The place of the next annual meeting was fixed at Pittsburg, and Dr. W. S. Foster was appointed chairman of the committee on arrangements.

The Importance and Necessity of Industrial Hospitals.

Dr. W. B. Lowman, Johnstown, urged in this paper the importance of the establishment of hospitals in conjunction with all the large industrial institutions, as a humane measure and also as a sound business investment, as employes thus cared for would be less likely to institute legal proceedings for slight injuries and in perhaps hopeless cases.

The Medical Expert Witness.

Dr. G. W. Wagoner, Johnstown, in this paper, argued that experts selected by the court would give better satisfaction than witnesses paid by parties to testify for the benefit of their side of the case.

State Medical Board Examinations.

Dr. A. O. Kelly, Philadelphia, laid especial stress on the importance of the examiner being a practical physician familiar with the progress of medicine. He believed that the questions should be limited to the practical and applied aspects of the subject, and should not be purely academical. He recognized the value of a general knowledge of the general principles of medicine and in no sense recommended the abolition of didactic lectures. He believed practical tests in addition to the written examinations, or the submission to the student of a number of case histories for study, discussion and suggestion would be a valuable augmentation to the examination. When a candidate is asked to give the treatment for a certain condition, he should be required to set forth his reasons therefor.

(*To be continued.*)

AMERICAN ACADEMY OF RAILWAY SURGEONS.

Tenth Annual Meeting, held in Chicago, Oct. 1 and 2, 1903.

This organization met under the presidency of Dr. L. Sexton, New Orleans. The academy has about 140 members and is an energetic scientific organization.

Conservatism in the Treatment of Crushing Injuries.

Dr. **Jere L. Crook**, Jackson, Tenn., reported three cases, showing how aseptic and antiseptic technic have reversed conditions, substituting salvation for sacrifice, and limbs of living flesh and bone for those of wood, cork and leather.

Drs. **R. Harvey Reed, Evan O'Neill Kane, A. H. Brumbaugh, H. M. Dean, F. A. Butler** and **O. B. Quinn** talked along the line of the conservation of limbs and of as much tissue as possible.

Injuries of the Large Joints.

Dr. **I. V. Crosby**, Stuart, Iowa, reported two cases to emphasize the necessity of carrying out the strictest antiseptic precautions from start to finish. By so doing the function in many severely injured and infected joints can be saved even in the rural districts.

Physical Examination of Railroad Employes.

Dr. **H. B. Jennings**, Council Bluffs, Iowa, urged the responsibility of the surgeon making these examinations for the company, and a lengthy discussion was elicited, during which different methods of examining railroad employes were brought out.

The Value of an Injury.

This was the title of the president's address, delivered by Dr. L. Sexton, New Orleans. He cited cases to illustrate verdicts for various elements of injury. The railway surgeon can materially lessen the loss or damage incident to injuries by careful, skilful and painstaking attention to each case.

Ocular and Aural Examination of Railroad Employes.

Dr. **Frank Allport**, Chicago, submitted a report and the resolutions on this subject recommended by the American Medical Association, which were referred to a committee and, on its favorable report, were subsequently adopted.

Other papers read were as follows: "Rheumatism in Connection with Minor Injuries of the Back," on how to differentiate the conditions, by Dr. A. Wilson, Alva, Okla.; "Traumatic Influence in the Production of Movable Kidney," an exhaustive treatise, by Dr. M. L. Harris, Chicago; "Radical Cure of Hernia," by Dr. E. W. Andrews, Chicago, and "Fracture of the Humerus," by Dr. F. A. Butler, Harvard, Neb. The latter described a recovery brought about by means of massage, electricity and constitutional treatment after one and a half years of post-fractural paralysis.

In a symposium on head injuries, papers were presented by Drs. C. H. Mayo, John E. Owens, Haldor Sneve, J. F. Pritchard, W. U. Cole, A. L. Wright and Ira B. Bartle.

Diet in Its Relation to Surgical Cases.

Dr. **A. B. Brumbaugh**, Huntington, Pa., said that a healthful diet in general, to aid and enable men and women to attain to their highest capacity mentally and physically, should be simply nutritious, and consist of such articles as were readily, quickly and perfectly digested. It should be mainly of fruits, vegetables simply cooked and the tallow-bearing meats. All excess and doubtful and harmful articles should be discarded, and the diet in surgical cases should conform strictly to the simple type of healthy living.

The secretary presented a letter from Dr. J. N. McCormack relative to the practicability of the academy becoming affiliated with or a branch of the American Medical Association. The communication was referred to a committee, which subsequently reported that the time was not ripe for the adoption of the plan proposed, and, on motion, the action of the committee was concurred in by the academy.

Officers.

The following were elected officers: President, Dr. Samuel C. Plummer, Chicago; vice-presidents, Drs. A. L. Wright, Carroll, Iowa, and W. U. Cole, Columbus, Ohio; secretary-treasurer, Dr. Thomas B. Lacey, Council Bluffs, Iowa; assistant secretary, Dr. H. B. Jennings, Councils Bluffs, Iowa; editor, Dr. D. S. Fairchild, Des Moines, Iowa. Place of meeting, Chicago; time to be decided by the executive committee.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Leg Ulcers.

The treatment of ulcers of the leg, according to Fischkin in *Med. Standard*, consists, 1, in the removal of conditions which may induce or favor necrosis; 2, the production of conditions which will favor the healing process as much as possible. The general outline of treatment consists, according to the author, in:

1. Aseptic cleansing of the leg.
2. Elevation of the leg and application of bandages to remove the venous stasis.
3. The application of remedial agents to induce healthy granulations.
4. The application of such remedies as will favor normal cornification.
5. The application of such remedies to surrounding tissues with a view to healing associated conditions, such as eczema, which may be caused by venous stasis.

In carrying out the first indication the leg should be bathed with soap and water unless great eczema is present, in which case alcohol dressings may be used, or a boric acid or 5 per cent. liquor alum. acetatis or a solution of hydrogen peroxid may be substituted.

These indolent, anemic ulcers must be stimulated in order to promote the formation of healthy granulations. This may be done by syringing the ulcer with hot water or a 1 to 2,000 potassium permanganate solution. This syringing should be followed by an iodoform dressing or the base of the ulcer painted with pure tincture of iodin or the application of unguentum hydrarg. rubrum, balsam of Peru or other stimulating remedies.

If the granulations project too high, caustics and astringents must be applied, such as argenti nitras, 10 per cent. Gangrenous ulcers are to be first cleansed with a hot potassium permanganate solution, followed by the application of a few drops of the following combination:

℞.	Chloralis hydratis	ʒiiss	10
	Camphoræ	ʒiss	6
	Glycerini	℥iss	45

M. Sig.: Apply locally.

An iodoform dressing is then applied.

Epithelization and cornification may be encouraged by carefully dressing the ulcer and producing drainage in order to prevent the accumulation of the secretions; or the base of the ulcer should be painted with a 2 to 4 per cent. solution of silver nitrate followed by bismuth subnitrate dermatol or ichthoform dressing. The ulcer is then covered with a gutta-percha dressing to aid drainage and to prevent the adhesions of dressings. The surrounding eczemas must be treated. If the eruption is vesicular or in the stage of serous discharge pastes must not be employed, but in their stead a dry powder as follows:

℞.	Zinci oxidi		
	Talci venet.		
	Amyli, āā	ʒiiss	10
	Acidi borici	gr. xlv	3

M. Sig.: Apply locally.

In the dry form of eczema some tar preparation is better, as follows:

℞.	Olei cadini		
	Olei rusci		
	Spiritus		
	Spts. etheris, āā	ʒiiss	10

M. Sig.: Apply locally.

The author also recommends Unna's paste prepared as follows:

℞.	Zinci oxidi	ʒx	40
	Gelatin	ʒv	20
	Glycerini	℥i	30
	Aq. destil.	ʒiiss	75

M. Sig.: Apply locally with a soft brush. changing the dressing in 3 to 10 days.

In the ordinary ulcers accompanied by pain the following is recommended as a dressing:

℞.	Tinct. benzoini comp.	ʒiv	15
	Balsami peru.	ʒii	8
	Lanolini	ʒx	40
	Ext. belladonnæ	gr. xxx	2

M. Ft. unguentum. Sig.: Apply locally.

As a local application in syphilitic ulcer the author recommends the mercurial plaster; or if the ulcer is not clean bathe with a mercurial bath and dust with calomel. Iodids should be given internally.

Some authors recommend the following combination in the treatment of syphilitic ulcers:

℞.	Hydrarg. chloridi mitis	ʒi	4
	Ichthoformi	ʒss	2
	Petrolati	ʒviss	26

M. Sig.: Apply locally; or:

℞.	Iodol	℥i	30

Sig.: Apply freely to the ulcer.

Dysmenorrhea.

The palliative treatment of dysmenorrhea, according to Bjorkman in *Merck's Archives*, is necessarily entrusted to the general practitioner, consequently the treatment is more or less symptomatic, while the radical treatment leading to its cure lies in the province of the specialist. The first step, according to the author, is to gently promote elimination by proper evacuation of the bowels if there is a tendency to constipation. The use of opium or morphin should never be resorted to. Codein and dionin may be used in their stead. He also condemns the use of alcoholics. In well-nourished women cerium oxalate may be given in six-grain doses (.40)) every hour previous to the beginning of the flow and continued until the pain has ceased. Pulsatilla is also recommended, given in 10-minum (.65) doses of the tincture four times a day. This is said to quickly relieve the spasms due to uterine disorders. The following combination is recommended by the author:

℞.	Tinct. pulsatillæ	ʒi	4
	Syr. aurantii	℥i	30
	Aq. destil. q. s. ad	℥iv	120

M. Sig.: One teaspoonful four times a day.

In neurotic individuals a combined treatment of bromids and antipyrin is serviceable or the bromids alone given as follows:

℞.	Pot. bromidi	ʒiiss	10
	Sod. bromidi	ʒiss	6
	Ammon. bromidi	ʒi	4
	Syr. aurantii corticis	℥iiss	75
	Tinct. rhei	ʒiiss	10
	Aq. destil. q. s. ad	℥viii	240

M. Sig.: One tablespoonful before meals in one-half a glass of water.

In dysmenorrhea of anemic or spasmodic nature viburnum is of great benefit.

℞.	Ext. viburn, prunifol. flu.	℥i	30

Sig.: One teaspoonful three times a day; or:

℞.	Chloralis hydratis	gr. lxxv	5
	Tinct. belladonnæ	gtts. xxx	2
	Ext. viburn. opul. flu.	℥i	30
	Elix. simplicis q. s. ad	℥iv	120

M. Sig.: One or two teaspoonfuls in sweetened warm water every hour until relieved.

The author also recommends stypticin as curative if given for long periods. He advises it in doses of grain ¾ to 1½ (.05 to .09) four or five times a day. In smaller doses it may be given beginning four or five days before the usual time for menstruation, giving a full dose the day previous to the usual time for the flow.

It may be given combined as follows:

℞.	Stypticin	gr. xx	1	30
	Ext. belladonnæ			
	Ext. hyoscyami, āā	gr. 3¾		25
	Euquinini	gr. xl	2	65

M. Ft. pil. No. xx. Sig.: One pill three times a day.

Dionin is recommended administered in the form of a suppository combined as follows:

℞.	Dionin	gr. ss-2/3		03-.04
	Ext. cannabis ind.	gr. iss		09
	Butyr. cacoa q. s.			

M. Ft. suppos. No. i. Sig.: One such to be inserted into the rectum two or three times a day. [The dose of cannabis indica is rather large.]

The foregoing suppository is valuable in the treatment of dysmenorrhea of young girls, where local treatment can not be properly carried out. The following may be used per vaginum:

℞.	Dionin	gr. ½		03
	Ichthyol	gr. iii		20
	Butyr. cacoa q. s.			

M. Ft. suppos. No. i. Sig.: One such to be inserted into the vagina two or three times a day, if necessary, to relieve the pain. Dionin is also recommended by the mouth as a palliative in dysmenorrhea as follows:

℞.	Dionin	gr. vss		35
	Aq. amygdalæ amar.	ʒiv	15	

M. Sig.: Fifteen drops two or three times a day; or:

℞.	Dionin	gr. ss		03
	Salipyrin	gr. x		65
	Acetanilidi	gr. ii		12

M. Chartula No. i. Sig.: One such powder three times a day.

[Dionin is ethyl-morphin hydrochlorate. It is a powder, faintly bitter, soluble in about seven parts of water, two parts of alcohol, and twenty parts of syrup. Stypticin is cotarnine hydrochlorate. It is a yellow powder, soluble in water or alcohol. It is recommended as a uterine sedative and as a hemostatic.]

Chronic Pharyngitis.

The following combinations are recommended by *Jour. des Pract.* in the treatment of chronic pharyngitis:

℞.	Sodii boratis	ʒii	8
	Tinct. myrrhæ	ʒi	4
	Infusi cocæ foliæ	℥viii	240

M Sig.: Use as a gargle every two hours; or:

℞.	Potassii chloratis	ʒiiss	10
	Infusi rubi fol.	℥iv	120
	Infusi cochleariæ (couch grass)	℥ss	15

M. Sig.: To be used as a gargle.

Abortive Treatment of Furuncles.

Reich, in an abstract in *Med. Age*, states that positive results are obtained by the treatment of boils with superheated dry-air. The heat is directly injurious to pathogenic organisms; active hyperemia of the tissues and consequently increased resistance to bacterial invasion is induced. The skin is sterilized and dangers to reinfection rendered less probable. According to the author's statement, in no case where the treatment was begun early did suppuration or tissue necrosis take place. The infiltration of the surrounding tissue disappeared more rapidly than ordinary in abortive cases. Reinfection in the tissue surrounding the boil never occurred. In cases of general infection the tendency to fresh boil formation was greatly diminished. He states that this form of treatment reduces the tension in the infiltrated tissue and relieves the pain as a result.

Medicolegal.

Physician to Determine Necessity for Information.—Section 4659 of the Revised Statutes of Missouri of 1899 provides that a physician or surgeon shall be incompetent to testify concerning any information which he may have acquired from any patient while attending him in a professional character, and which information was necessary to enable him to prescribe for such patient as a physician or do any act for him as a surgeon. The Supreme Court of Missouri, Division No. 2, says, in the case of State vs. Kennedy, that it takes it that the physician or surgeon must, as a general rule, under the statute, 'determine for himself whether the information acquired by him from his patient is necessary for him to prescribe for such patient, and, in the absence of some showing to the contrary, the presumption must be indulged that the information in question was necessary for that purpose; otherwise, he would not desire it. To rule otherwise would be to usurp the prerogative of a physician learned in his profession, which the court has no inclination or right to do. The court adds that, of course, it does not mean to say that it will not pass on questions which are apparent to the ordinary observer, and to one not learned in the sciences of medicine and surgery, which have nothing whatever to do with the case under consideration, and hold them not privileged.

Representations as to Health and Medical Treatment.—The Supreme Court of Michigan says, in the case of Blumenthal vs. Berkshire Life Insurance Company, that the law is settled that in a representation, contained in an application for insurance, that the assured is in good health, or that he has not been attended by a physician or consulted one professionally, the answer is to be construed as meaning, in the one case, that he has not suffered an illness of a serious nature, tending to undermine the constitution, and that a state of health is freedom from disease or ailment that affects the general soundness or healthiness of the system seriously. And as to representations as to treatment by physicians, the omission to state a treatment by a physician for some temporary indisposition does not avoid the policy. In this case the trial judge charged the jury that it is not the duty of an applicant for insurance to advise the insurance company of every time he consults a physician for some temporary indisposition; but it is his duty to advise them, in answer to that question, every time that he has consulted a physician relative to any serious ailment; and that if they found that the disease with which the insured was suffering when he made his application was such a disease as would affect his general health then it was his duty to have advised the company that he had been attended by a physician. The Supreme Court thinks this was clearly within the rule as above laid down.

Exclusion of Immigrant for Favus of Finger Nails.—The United States Circuit Court for the Southern District of New York says, in re Neuwirth, that on certificate of the proper examining medical officer, the board of special inquiry unanimously voted to exclude the alien immigrant in question in this case as having a loathsome disease, viz., favus of the finger nails. His father presented a sworn petition for a writ of habeas corpus averring that his son was not suffering from a loathsome and dangerous contagious disease, but that his disease was curable and slight, and that he had improved since he arrived, and was almost cured. He also presented the affidavit of a physician to the effect that while the condition of the immigrant's finger nails was not normal, he was doubtful whether he was suffering from favus; that, if he was, a slight operation would work a cure; and that in his opinion favus, in this form, was not a "loathsome" nor a "dangerous contagious" disease. On this record the court thinks that it could hardly be said that it was affirmatively and satisfactorily shown that such person did not belong to one of the excluded classes of immigrants. Moreover, it quotes the provision of Section 10 of the act of Mach 3, 1903, that the decision of the board of special inquiry, based on the certificate of the examining medical officer, shall be final as to the rejection of aliens afflicted with a loathsome or with a dangerous contagious disease, or with any mental or physical disability which would bring such aliens within any of the classes excluded from admission to the United States, etc. It says that under the earlier act it has been repeatedly held that the only jurisdictional fact to be established in these cases was the alienage of the immigrant, and that when that appeared the court would not review the decision of the board. The language of the act of 1903 is somewhat different, but it is not thought that by thus modifying it congress intended to provide that before the decision of the board could be accepted as final it must first be made to appear by independent proof as a jurisdictional fact that the rejected alien was actually afflicted with the specified disease. Such an interpretation would make the tenth section meaningless. Wherefore, the court dismissed the writ of habeas corpus.

Hospital Register Not Admissible in Evidence—Privilege.—The Supreme Court of Minnesota holds, in the case of Price vs. the Standard Life and Accident Insurance Company, that a register of patients, kept at a hospital, naming or pretending to name, the disease with which a patient was said to be suffering, is not admissible in evidence to show and establish the nature of the disease. Here the entries in the register in question were made by the superintendent in charge, who was a female physician, in the usual course of business at the hospital, and showed when the patient entered, when he departed therefrom, and the nature of the disease from which he was said to be suffering. This superintendent produced the register, and testified that the entries concerning the patient were made after the physician in charge had observed the case long enough and knew sufficiently about the patient to state the kind of disease, and were wholly based on information received by her from the doctor. The witness had no personal knowledge of the patient, and had no recollection of the case, apart from the record. Therefore, the court says, the entries amounted to nothing more or less than what the superintendent wrote in the register, what the attending physician told or reported to her concerning the patient's illness. To permit these entries to be introduced in evidence was to disregard in a very noticeable manner the rule forbidding the introduction of hearsay testimony, as well as the spirit of the statute which prohibits the examination of a physician as to certain matters without the consent of his patient. The information communicated by the physician in charge to the superintendent of the hospital was acquired by the former while attending the patient, and was necessary to enable him to prescribe or act for him. The physician would not have been allowed to make any such disclosure, and the statutory restriction on him could not be evaded by introducing in evidence testimony of a third party as to what the doctor said about the case. But the entries did not even rise to the dignity of a repetition of what the doctor said to a third party, for the superintendent remembered nothing, except that she made the entries. This testimony should have been excluded. Again, the court says that, although the statute differs somewhat in the several states, the general proposition is that it seals the lips of the physician, and prevents him from divulging in a court of justice information which he has acquired while in the necessary discharge of his professional duty, but it does not absolutely prohibit the examination of an attending physician as a witness. The well-established rule seems to be that a physician may be called on to testify to the simple fact that he has treated or attended a certain person as his patient, and as to the number of his visits. This doctrine, looking at the question in a logical way, comes very near trespassing on the statute, but the court finds no cases in opposition, and none was cited by counsel.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

September 26.

1 *Typhoid Fever: An Analysis of 717 Cases. John McCrae.
2 *Spotted Fever (Tick Fever) of the Rocky Mountains: A New Disease. John F. Anderson.
3 *Some Biologic Differences Between the Natural and the Artificial Feeding of Infants. David L. Edsall.
4 *Personal Experiences in Operations on Diabetic Patients. Charles P. Noble.
5 *The Value of Eosinophilia in the Diagnosis of Trichinosis, with Report of a Case. Edwin R. Gould.
6 Inguinal Hernia of an Imperfectly Developed Uterus and Appendages. R. Ferguson.
7 The Surgery of To-day. Alex. Hugh Ferguson.

1. **Typhoid Fever.**—Among the notable points in the analysis of 717 cases observed by McCrae at Montreal were the moderate mortality, 9.2 per cent., the large proportion in which the Widal test was positive, that is, 92.77 per cent., the occurrence of rose spots in 65 per cent. of all cases and the predominance of constipation over diarrhea. The large number of cases of perforation—43, of which 23 were operated on, with 6 recoveries—was also a notable point. The treatment followed was largely that of cold bathing, or cold water, or alcohol spongings. The routine administration of the first bath is, as a rule, at 90 or 85, lowering about 10 degrees the second time and the succeeding baths at 70 or 75. The antipyretic treatment consists of phenacetin, alternating with salol. In most cases a purely liquid diet was given, though semi-solids were allowed in some cases. The author says no rule as to diet will apply to all cases, but that any food that reaches the intestines in any other than a perfectly fluid form is bad.

2. **Spotted Fever (Tick Fever) of the Rocky Mountains.**—Anderson gives his observations on spotted fever of the Rocky mountains. The parasite was discovered by Wilson and Chowning, and their work was described in THE JOURNAL, July 19, 1902, p. 131. Anderson suggests the name tick fever on account of the relation of tick to the disease and the preemption of the term "spotted fever" by other affections. He thinks it resembles typhus fever more than any other disease, and without a blood examination and close bedside observation there might be trouble in the diagnosis in cases of typhus fever occurring in a locality where tick fever prevails. In typhus, however, the long period of incubation, history of cases, the eruption and intensely contagious character and the time of its prevalence, not limited to a short time in the spring, would be important diagnostic points. Until this past season the treatment of tick fever has been purely symptomatic, but since the discovery of the parasite the use of quinin in large doses, preferably hypodermically, has been employed in 5 cases, all of which recovered, while 5 cases that did not have this treatment proved fatal. Anderson hopes that the use of quinin will be followed in future treatment of the disease, and would give it in large doses hypodermically every six hours. He advises its early and continuous use.

3. **Infant Feeding.**—Edsall calls attention to certain biologic peculiarities of milk from different animals and their bearing on the artificial feeding of infants, especially the oxidating ferment in many milks, such as cow's milk, and its absence in human milk, and the diastatic ferment found in human milk and not in cow's milk. He thinks the recent biologic investigations emphasize the dangers of sterilization and indicate that the results of pasteurization are not altogether beneficial since they destroy ferments and, therefore, affect important qualities of milk.

4. **Surgery in Diabetes.**—Noble tabulates 7 cases from his own practice where operations were done in diabetics, with the results. He shows that 6 of them made good recoveries; 1 died in diabetic coma. In the cases that recovered, the general progress was not different from those not the subject of glycosuria. In looking up the literature he is able to add 62 more cases, with 52 recoveries. Seventeen died, 1 of the deaths was from erysipelas, 2 from sepsis, 5 were from causes not stated, and 9 from coma. The chief cause of death after operation in diabetes is from coma. This is the one that it is the least possible to guard against. He advises in all cases preliminary treatment by diet and the administration of codeia and strychnin. He would postpone operation if more than 2 per cent. of sugar was present in a total excretion of three pints per day. After operation, morphin, codeia and strychnia have been prescribed, and salt solution freely administered per rectum and by hypodermoclysis, and the diet strictly regulated. Where the indications for operation were marked he has advised it, at the same time pointing out the risk or the possible occurrence of coma. A review of the literature has not altered his opinion as to the wisdom of this course. When a routine examination of the urine as a preliminary measure to operation is followed, operation on patients suffering from unrecognized diabetes can be avoided. Contraindication to operation is strongest in patients suffering markedly from constitutional symptoms of the disease—poor nutrition, wasting, intense thirst and morbid appetite.

5. **Trichinosis.**—Gould points out the value of blood examination in these diseases and the importance of a large percentage of eosinophiles as a diagnostic point.

New York Medical Journal.

September 26.

8 *The Gastric Contents in Gastroptosis. Thomas R. Brown.
9 *Is Registration and Disinfection a Successful Method of Combatting Pulmonary Consumption? Thomas J. Mays.
10 *The Results of Brain Surgery in Epilepsy and Congenital Mental Defect. William P. Spratling.
11 The Necessity of Special Legislation for the Prevention of the Contamination of Our Water Supply as a Preventive of Typhoid Fever. James Mitchell.
12 *The Treatment of Acute Blennorrhea of Adults. James F. McCaw.
13 *Some Obscure Cases of Eye Strain. F. W. Marlow.

8. **Gastric Contents in Gastroptosis.**—From his analysis of the stomach contents in twenty cases, Brown finds that in simple gastroptosis there is a slight diminution in the amount of free hydrochloric acid in the majority of cases; in cases where the dilatation is slight, the free hydrochloric acid is further reduced, although not markedly so, while in those cases associated with marked dilatation free hydrochloric acid is usually entirely absent. These facts would suggest that gastroptosis *per se* leads to a very slight diminution of free hydrochloric acid, and that it is the subsequent dilatation which so often complicates gastroptosis that leads to marked dilatation, the diminution being apparently more marked the greater the associated dilatation.

9. **Tuberculosis.**—Mays analyzes the death records from pneumonia and tuberculosis in a number of cities and claims to find that the combating of tuberculosis by disinfection, registration, etc., seems to increase the pneumonia mortality, and that in a number of the localities where these are practiced there has been an increase in phthisis during the last five years.

10. **Brain Surgery in Epilepsy and Idiocy.**—Spratling's paper is concluded with an analysis of the results of surgery from the literature and his own observations. He thinks the statistics show that if epilepsy is general and of some years' duration we need not look for a cure, though in selected cases operation may ameliorate the symptoms, but most frequently only temporarily. If the epilepsy is unessential, reflex, rudimentary in type, or of short duration, and the operation removes the cause early enough, we may expect the convulsions to cease in many cases, provided the patient is free from the vices of heredity that are beyond the reach of the surgeon. He does not find a single case of congenital mental defect in which a normal mental status was established through surgical intervention. There are many reports of cases benefited by surgery, the degree not being given, making it diffi-

cult to judge of its value. The fact that operations for this purpose have gone into disuse is the strongest argument against their utility. They may have a limited value, but not what was at one time expected.

12. **Acute Blennorrhea of Adults.**—McCaw advises prophylaxis by extreme avoidance of any possible way of infection and the cautioning of every woman with vaginal discharge and every man with gonorrhea as to the dangers to the eyes from such discharges and the importance of thorough cleanliness. He makes the assertion that cocain should never be used in eye diseases, though a few exceptions are admitted. He would prohibit bandaging and poulticing of the eyes. The first thing indicated is the use of cold compresses, except where the conjunctiva looks harsh and is covered with a tenacious grayish exudate, in which case hot applications are preferable. Cold should be kept up regularly day and night from twenty-four to thirty-six hours. During the second stage, where there is free purulent discharge, the important part of the treatment is frequent and thorough cleansing of the eye. He would use here one-half saturated solution of boric acid for this purpose. As soon as free purulent secretion is established and the conjunctiva is in a succulent condition, it should be brushed twice daily with a 2 per cent. silver nitrate solution as long as the free discharge continues. On the first indication of corneal infiltration or ulceration iced compresses should be discontinued and hot applications substituted. He insists on attention to the general vital condition of the patient.

13. **Eye Strain.**—Three cases are reported by Marlow, the consideration of which, he says, indicates the following points:

> The most careful investigation and the apparently accurate correction of all the discoverable errors may completely fail to relieve the symptoms; may, in fact, aggravate them, and yet the symptoms may still be due to eye strain. Indeed, the fact that glasses which are apparently correct aggravate the symptoms is, I believe, in most cases evidence that the latter do arise from eye strain, and that a latent error is present, usually an error in the muscle balance. In all the cases described the possibility of the existence of the kind of error which was finally found to be present was fully appreciated from the first. In the second place, I believe that lapse of time is a very important factor in the elucidation of the true nature of these cases. The action of the accommodation in neutralizing refractive errors is so automatic and persistent that all efforts to annul it sometimes fail to be completely effective, even atropin and other powerful cycloplegics failing to bring about a complete relaxation. The natural relaxation due to advancing years often reveals a hitherto latent error. Similarly the instinctive tendency to see single and not double causes the extrinsic muscles to contract so as to maintain a parallelism of the visual lines. This contraction is so constantly maintained that the muscles get into a condition of tonic spasm which is extremely persistent. Just as we have a spasm of the accommodation in cases of hyperopia and astigmatism in the interest of clear vision, so we have a spasm of the extrinsic muscles in the interest of single vision, and the latter is far more difficult to demonstrate than the former. It is surprising what high degrees of error may remain latent year after year and produce a train of symptoms absolutely intractable to treatment until the manifestation and correction of these errors has occurred. I have seen some cases which have inclined me to think that not only is lapse of time the only thing which will reveal the true nature of the ocular conditions, but that old age itself is reached in some cases before the true condition becomes manifest.

Medical Record, New York.

September 26.

14 *Some Aspects of the Old and the New: A Plea for Conservatism in Medicine and Surgery. Beverley Robinson.
15 *Abnormal Frequency of Urination Treated with Epidural Injections. Ferd. C. Valentine and Terry M. Townsend
16 *Nitrous Oxid in the Production of Surgical Anesthesia. Irving A. Meeker.
17 *The Treatment of the Pedicle in Ovariotomy and Salpingo-oöphorectomy. L. H. Dunning.
18 Post-graduate Work in Budapest. Willard J. Stone.
19 A Case of Venereal Warts. A. P. Stoner.
20 Circumcision in Infancy. William B. Harlow.

14. **Conservatism in Medicine and Surgery.**—Robinson's article is a plea for greater conservatism in medicine as well as surgery. He notices particularly in reference to the former the change of views regarding the cold bath in hyperthermic conditions, the over-use of arsenic, quinin, morphin, etc., the tendency to employ too many drugs and the need of attention to hygiene as against too indiscriminate drugging.

15. **Epidural Injections for Enuresis.**—Valentine and Townsend give the results of epidural injections according to the Cathelin method by injecting normal salt solution into the lower extremity of the spinal canal at the tip of the sacrum under antiseptic precautions, and describe the technic. The patient is placed on one side or the other and the lower sacral opening is then a little above the line between the nates, as he shows by a figure. When epidural injections are made for disturbance of urination the authors say it is well to place the patient in a sort of Sims position, the knees drawn as tightly as possible towards the chest and the legs flexed. The fingers are passed down over the sacral spinous processes until the last perceptible one is felt under the finger tips of the left index and middle fingers. These are then slightly separated and pushed downward until each of them presses an osseous tubercle. The skin is stretched over these tubercles, and between them is the point of puncture. The needle is held at an angle of about 40 degrees to the sacral curve and thrust through the tensely stretched skin, then depressed about 20 degrees and the middle finger raised from the skin while the index is pressed on the point of puncture to steady the needle and the tissues. In this position the needle is cautiously pushed up into the sacral canal, and if no gross abnormality exists and the method is sedulously followed, the needle can be entirely inserted without touching the periosteum of any part of the sacral canal. (See cuts on page 888 of The Journal.) An injection is slowly made of about nine-tenths of the contents. The after-treatment is simply wiping dry and covering the site of puncture with a little collodion. The conclusions which seem warranted are given by the authors as follows:

> 1. Epidural injections with decinormal salt solution offer the most promising results in abnormalities of urination due to faulty vesical innervation.
> 2. Incontinence of urine, enuresis, excessive frequency of urination (unless due to other pathologic conditions) can at least be ameliorated by epidural injections.
> 3. Cautiously performed, epidural injections are in no wise dangerous to the patient.
> 4. Epidural injections are no more painful than any hypodermatic injection with a mild solution.
> 5. Epidural injections can be performed by anyone who follows the technic outlined and is alert to those anatomic variations which are so frequent in the region.
> 6. The immediate effects of epidural injections are very rarely even disagreeable.

16. **Nitrous Oxid Anesthesia.**—Meeker advocates the use of nitrous oxid anesthesia as the safest method in minor surgical operations and as a preliminary to ether anesthesia.

17. **The Pedicle in Ovariotomy.**—Dunning reviews the various methods and gives the ordinary methods of treatment of the pedicle. He calls attention particularly to the dangers of intestinal adhesions to the stump in both ovariotomy and salpingo-oöphorectomy. Of a large number of methods brought forward to do away with the stump in the latter operation, none has seemed entirely satisfactory. The method he occasionally employs comes near meeting the requirements, but has an element of danger in inexperienced hands. This consists in boldly cutting across the fallopian tube at the uterine horn, then severing the attachment of the mesosalpinx from the under surface of the fallopian tube, cutting free the ovary from its attachment to the broad ligament and uterus, tying all bleeding vessels, and with a whip-row stitch closing in all raw surfaces. One unfortunate experience with hemorrhage led him to see the danger of such free cutting without more extensive ligation of the blood vessels. In some very vascular patients he has sometimes ligated the ovarian artery near the pelvic wall to avoid this. For several reasons the stump method is the preferable one if a sufficiently long pedicle can be found, but he points out the possible dangers and difficulties in covering the stumps. For many years he has used catgut alone for ligation, and has had no reason to regret the selection of this material. He never leaves the pedicle without having ligated each artery in it.

Medical News, New York.

September 26.

21 *Concerning Some Points in the Treatment of Typhoid Fever. Glentworth R. Butler.
22 *Note on Typhoid Fever and Scarlet Fever, with Special Reference to the Diagnostic Value of Blood Cultures. Ludvig Hektoen.
23 *Typhoid Fever in Infancy and Childhood. J. P. Crozer Griffith.
24 *Nourishment, Medication, Hydrotherapy and General Management of Typhoid Fever Cases. W. T. Baker.
25 *The Etiology and Chemical Pathology of Gallstones. (Continued.) C. A. Herter.
26 *The Pathology and Treatment of Tardy Post-operative Intestinal Obstruction, with a Report of Cases. Ellsworth Eliot, Jr.

21. **Typhoid Fever.**—Butler believes in the milk diet, though varied with buttermilk, koumyss, oyster and clam soup, etc. The stools should be inspected for undigested curds and the milk be either stopped or diluted one-half with water, plain or mineral, or peptonized. If the patient is accustomed to tea or coffee, he would not cut them off entirely, but allow them once daily. In all cases lemonade, orange juice and grape juice are not only allowed, but encouraged, unless there is a troublesome diarrhea. Mutton, beef and chicken broths, bouillon, consommé or other clear soups are given in moderation unless the bowels are moving too freely. He also uses the white of an egg or the whole egg beaten up and employed a little sparingly. Plain ice cream, water ices and jellies are, as a rule, unobjectionable. Lactose is a valuable force producer and may be given in some cases, one, two or more ounces daily, dissolved in milk or water. With the above dietary the variety is usually sufficient, which is a matter of some importance unless the patient is delirious. We often prescribe more food than can be digested, and a persistent feeling of gastric discomfort, nausea, tympanites, etc., should be watched for. Water should be given as regularly as food. He would not take up solid food until three days or more after defervescence, and then use soft food only. He remarks that the cold bath is less used than formerly. Cold is not merely demanded for fever, but also for its stimulating and tonic effects, and he recommends the following methods for the application of cold: First, a cold-mitten rub, repeated at intervals of three to six hours when the fever reaches 102.5, then the towel bath of Baruch, and ice rub, which is still more vigorous in its action and requires some discretion in its use. The cold-mitten rub is usually sufficient for most cases. During the intervals between cold rubbings a wet compress to the abdomen is advised by some authorities, though he has seldom employed it. He advises measures of prophylaxis, such as disinfection of the patient's hands, cleansing of the nails, etc., and as regards medicinal treatment, many cases do best with little or no medication, but he thinks well of intestinal antiseptics and an initial dose of calomel, and remedies for intestinal hemorrhage, such as calcium chlorid and gelatin and powdered suprarenal as an arterial constrictor. A pint or more of a 10 per cent. solution of gelatin may be given in the twenty-four hours; 20 to 30 grains of calcium chlorid every two to four hours, and 5 or more grains of the desiccated suprarenal every four hours up to half a dram in twenty-four hours. He prefers these as a routine measure to the opium, ergot and lead of former treatment. To quiet the restlessness and excitement moderate doses of opium or its alkaloids are advisable in cases of hemorrhage.

22. **Blood Cultures in Typhoid.**—Hektoen reports a case and emphasizes the point that the practically constant presence of typhoid bacilli in the blood in the early stages during the height and at the beginning of relapses of typhoid makes it possible by the use of proper culture methods to settle the diagnosis of typhoid in special cases like those reported. This is also true in cases of paratyphoid fever.

23. **Typhoid Fever in Infancy and Childhood.**—Griffith points out the peculiar characters of typhoid in infancy and its greater frequency than has been generally estimated. The chief characteristics are the less typical onset and the tendency of nervous symptoms to overbalance intestinal ones. The average duration may be stated as from fourteen to twenty-one days, although often a little longer. The diagnosis is difficult and the value of the Widal test is inestimable. He emphasizes the importance of some complications and sequelæ. Relapses seem to be about as frequent as in adults. The prognosis is on the whole good. As for treatment, he does not advise cold baths. His custom is to apply sponging first, and if this is not sufficient a graduated bath of 90 degrees lowered down to 80 F. In many instances he has had good results with the abdominal ice bag. In some cases a warm tub bath of 95 to 100 is productive of good results. Sponging sometimes has a bad effect and it is a very questionable procedure in case the child is crying or struggling. Children develop a high temperature readily and tolerate it well, therefore the temperature can be let alone in many cases.

24. **The Treatment of Typhoid Fever.**—Baker believes in a more liberal diet in typhoid than some authors. He would allow more or less soft foods, but avoid any harsh materials. Mushy masses that do not over-distend the abdomen may do good by wiping off mucus and helping to carry off the discharges. For medication he thinks a cleaning out by the use of calomel useful; when the fever is high phenacetin, codein, salol and quinin in combination, and carbolic acid and tincture of iodin, 1 minim of the former, 2 of the latter in water every four hours in the daytime for its antiseptic effect. In case the carbolic acid is disagreeable any other good antiseptic will probably do. He notes the favorable reports as regards acetozone, but has not yet tried it. Hydrotherapy is used in all the ways he knows of, and he insists on the importance of good nursing. He tabulates 31 cases treated after this plan with good results, which he thinks support his view.

25. **Gallstones.**—Herter discusses the origin of gallstones, the existence of biliary stagnation producing infection and cholecystitis and the mode of action of the bacteria, decomposition of the bile and the influence of biliary reactions, concentration, foreign bodies and the agglutinative action of bacteria. He thinks gallstones may form within a comparatively short time, in three to six months under favorable conditions, and that bacteria may enter the gall bladder from the intestinal canal by the normal routes or from bacterial foci which discharge into the general circulation, and by the passage of bacteria from the intestine to the portal circulation, which he thinks is possible in spite of the negative results of Carmichael. The question whether constitutional influences can produce gallstones is also noted, and the need of future study on this point is mentioned. He reports experiments on the excessive feeding of fat as having a bearing on the production of biliary concretions, but the results are more suggestive than complete. Arteriosclerosis is possibly coincident, but not necessarily a cause. He thinks the future treatment of gallstones will be chiefly in the way of favoring the subsidence of cholecystitis.

26. **Post-Operative Intestinal Obstruction.**—The importance of avoiding adhesions in laparotomy cases liable to produce post-operative obstruction is emphasized by Eliot, who describes the symptoms and points out the dangers of leaving raw surfaces and of drainage. The immediate post-operative treatment for the prophylaxis of these adhesions is the establishing as early as possible of exaggerated peristalsis. During the first twenty-four hours he would use rectal enemata and warm saline solution, with or without turpentine, and in cases of persistent vomiting he would use lavage. As soon as the nausea and vomiting subside, small doses of calomel and salts should be administered and movements favored by high turpentine injections. The formation of adhesions is still further probably decreased by frequent changes in posture and the raising or lowering of the head, the foot or sides of the bed. These are not routine methods in every case, but only when there has been an extensive or infectious peritonitis or after operations involving suture of intestinal loops or operations for the relief of obstruction due to bands. The actual treatment of the obstruction itself does not differ from the treatment of obstruction from any cause. Early laparotomy, the ligation and removal of constricting bands, the disentanglement of adherent intestine, with resection if necessary, the closure of the abdomen with or without drainage and the prevention if possible of subsequent adhesions is the general routine treatment. Several cases are reported in detail.

Boston Medical and Surgical Journal.

September 24.

27 The Ill Health of Francis Parkman. (Continued.) George M. Gould.
28 Three Cases of Tumor of the Cerebellum. John J. Thomas.
29 *Tuberculosis of the Spine. A Statistical Study of the Cases in the Orthopedic Department of the Carney Hospital. Joel E. Goldthwait.
30 *A Note on the Association of a Rise in Systolic Blood Pressure with the Onset of Perforative Peritonitis in Typhoid Fever. John Bradford Briggs.

29. **Tuberculosis of the Spine.**—Goldthwait analyzes 108 cases of Pott's disease in the out-patients of the orthopedic

department of the Carney Hospital prior to 1902. Sixty-two of these reported more or less regularly for treatment; 41 of the latter were under 30 years of age, and in 21 of the cases the disease had existed for from six to twenty years before applying for treatment. In 20 cases there was abscess. Of this number 8 died and 4 are at present in poor condition. In 11 cases there was paraplegia, and of this number 2 died. *Of the 62 cases 11 died.* In nearly all the cases death was due to local infection or to its extension to some other part of the body, the average time between the onset of the disease and the time of death being four years. He calls attention to the fact that these cases were hospital ones, living under poor hygienic conditions. At the last report 20 patients were entirely free from symptoms, and in 18 others there has been great improvement.

30. **Blood Pressure and Typhoid Perforation.**—For two years Briggs has noticed a sharp rise in the systolic blood pressure, as measured by a modified Riva-Rocci apparatus, occurring in patients undergoing laparotomy and produced by mechanical irritation of the peritoneum. Dr. Harvey Cushing suggested that a similar rise in the blood pressure could possibly be produced by intestinal perforation and might be of value in the early recognition of this accident. From Briggs' own observation and those of Dr. Cook he notices that patients suffering from acute general or rapidly spreading peritonitis, of whatever origin, uniformly showed a state of hypertension of the pulse, and similar observations have been made and reported by Crile. During the past year they kept close watch on the blood pressure in the typhoid patients in Dr. Osler's service in the Johns Hopkins Hospital, and in 2 patients out of a large number abdominal symptoms justifying exploratory laparotomy were observed and the condition of the blood pressure in each was of interest. These 2 cases are briefly reported. In one perforations were found; in the other the symptoms suggested perforation, but there was no rise of blood pressure to speak of, and Briggs considered therefore that no perforation had occurred, but the abdomen was opened and the intestines carefully examined and no perforation found. He thinks it seems certain that patients with a general or rapidly spreading peritonitis have constantly, or at least in early periods, an abnormally high blood pressure. That in perforative peritonitis a sharp rise in blood pressure *may* precede the onset of other symptoms. That in doubtful cases like his second one, where perforation is suspected, and the general previous blood pressure is known, the course of blood pressure after the onset of grave symptoms should receive consideration in determining the propriety of operation.

Cincinnati Lancet-Clinic.
September 26.

31 The Physician of To-day. George J. Monroe.
32 Surgery of Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued.) B. Merrill Ricketts.

American Journal of Orthopedic Surgery, Boston.
August.

33 The Family Physician, the Specialist and the Patient. Louis A. Weigel.
34 *The Correction of Deformity at the Hip, the Result of Disease. A Study of the Best Methods and Best Positions. Virgil P. Gibney.
35 *Subtrochanteric Osteotomy in Adults, in Adolescents and in Young Children. E. H. Bradford.
36 The Mechanical vs. the Operative Treatment of Rachitic Deformities of the Lower Extremities, Presenting a New Osteoclast. R. Tunstall Taylor.
37 *The Surgical Pathology of Genu Varum and Genu Valgum. Wallace Blanchard.
38 *The Occurrence of Painful Affections of the Feet Among Trained Nurses. Robert W. Lovett.
39 *A Further Consideration of a Modified Form of Osteotomy Combined with Osteoclasis, Osteotomoclasis. W. Barton Hopkins.
40 A Consideration of the "Round Shoulder" or "Stoop Shoulder" Deformity in Childhood, with Especial Reference to the Proper Adjustment of the Clothing in Preventing and Treating Such Conditions. Joel E. Goldthwait.
41 The Abuse of Flat-foot Supports. Wisner R. Townsend.
42 The Importance of Supplementing Tendon Transplantation in the Treatment of Paralytic Talipes by Other Procedures Designed to Assure Stability. Royal Whitman.

34. **Deformity at the Hip.**—Gibney deprecates the use of force in the correction of hip deformities resulting from disease, and rather favors the use of subcutaneous *osteotomy* in these cases. He holds that the corrected position must be maintained for many months under a closely fitting plaster-of-paris bandage followed by a closely fitting splint for several months more. He would prefer to have the ankylosed limb *straight rather than slightly flexed*, as there is less danger of developing trouble later with this than with the flexed limb, and walking is less interfered with.

35. **Subtrochanteric Osteotomy.**—Bradford claims that the operation of subtrochanteric osteotomy for the correction of deformity following hip disease can be done in adults without fear of non-union, or even in middle life, and that the danger of relapse is greater when the operation is done in childhood or rapidly growing years. The period of convalescence and disability, however, is comparatively longer when the operation is begun later in life, but he recommends deferring the operation when possible until the period of rapid growth is passed.

37. **Genu Varum and Genu Valgum.**—In these conditions Blanchard believes in correction by osteoclasis or osteotomy and that epiphysiotomy is hardly worthy of consideration. Osteotomy has some slight dangers from which osteoclasis is free, and the long period required for bone union and recovery would condemn it when osteoclasis is available.

38.—*This article appeared elsewhere.* See The Journal of July 18, ¶6, p. 204.

39. **Osteotomoclasis.**—This new operation is suggested by Hopkins in cases where simple osteotomy is *inappropriate*. It consists in a combination of partial osteotomy and osteoclasis. Partial section, he says, seems to be a rational preliminary step to osteoclasis in certain cases. He would use the combined operation in cases suitable for osteotomy, producing the simple instead of compound fracture by the method, osteoclasis being performed after the skin wound has entirely healed.

Annals of Surgery, Philadelphia.
September.

43 *Operative Possibilities in Cases of Advanced Carcinoma of the Breast. Lewis S. Pilcher.
44 *Cystic Degeneration of the Mamma, Showing Transformation Into Scirrhous Carcinoma. Aller G. Ellis.
45 Surgical Treatment of Cholelithiasis. Albert A. Berg.
46 A Prostatic Tractor for Perineal Prostatectomy. G. Frank Lydston.
47 A Case of Ascites Due to Liver Cirrhosis Treated by Operation. Rutherford Morison.
48 Gangrene of Colon and Ileum After Operation for Appendicitis. Nathaniel P. Dandridge.
49 Paraffin Casts of Urethral Calyces, Pelves and Ureters. Byron Robinson.
50 Embolic Gangrene of the Leg as a Sequel of Acute Lobar Pneumonia. Charles L. Gibson.
51 *Fractures of the Vertebræ. John E. Owens.
52 *Dislocation of the Outer End of the Clavicle. John G. Sheldon.
53 *Method of Retaining Ends of Fractured Bones in Apposition During Fixation by Plaster-of-Paris Dressing, etc. Robert W. Johnson.
54 Blood Examinations in Their Relation to Surgical Procedures. L. L. McArthur.
55 On Myositis Ossificans Traumatica. John F. Binnie.
56 Bridge for Treatment of Nasal Fractures and Deformities. W. W. Grant.

43. **Carcinoma of the Breast.**—Pilcher gives the results of 50 cases which have been under his care in the Seney Methodist Hospital from 1888 to 1900. In 7 of them the disease had extended beyond the possibility of entire removal, and in 1 of these, in which a portion of the rib was removed, pneumonia developed which proved fatal in three days. This is *the only fatality attributed to operation in the whole series.* He classifies his operations according to their extent. In 2 cases ablation was complete to the apex of the axilla, without removal of any pectoral muscle. One of these remained well for six years, when intrathoracic disease developed which proved fatal. The second underwent a second operation eighteen months later, and remained well for five years, when the same disease appeared in the other breast. This second breast was removed, together with the contents of the axilla and the pectoralis major, but cancer of the liver appeared three years later and death occurred ten years after the first operation. In 11 cases ablation was complete to the apex of the axilla with removal of the pectoralis major muscle. Three cases are still well at the end of eight years or more. One died of cerebral apoplexy one year after operation without recurrence of the disease. Another one has remained well for

six years, but has had slowly advancing carcinoma since, and is now, nine years after operation, still living, but in feeble health. Three cases died from recurrence within periods of from a few months to two years. The eighth case was the one already mentioned in the preceding class. One remained well for a year and has since been lost sight of. In the third class, where both pectoralis muscles were removed, 2 are well for three years or more after the operation; one is living five and a half years later, but has a slowly advancing recurrence. Another is still living three years after operation without external recurrence, but with evidence of liver carcinoma; 6 died at periods varying from 12 months to five and a half years after the operation. In 18 cases operation was still more extensive; one or both pectoralis muscles were removed and the glands in the subclavicular region. Only 2 of these patients have remained well at six and four and a half years respectively, though one of them has beginning enlargement which suggests a recurrent disease in the ribs. The others are all dead, mainly from intrathoracic metastases. Pilcher considers that his experience has emphasized the fact that nothing is more illusive than the apparent local extent of carcinoma processes. The size of the local growth is no positive index to the number and distance of outlying deposits. He insists that practically every case of carcinoma of the breast when it has reached that degree of development at which a probable tumor is formed is already in an advanced stage and metastatic processes have, as a rule, already begun to be formed. Nevertheless, experience warrants the statement that surgery can promise a large percentage of absolute cures if employed as soon as the presence of the disease is determined.

44.—This article appeared elsewhere. See The Journal of September 5, title 91, p. 637.

51. Fracture of the Vertebrae.—The following are the conclusion of Owens' paper, which includes a report of cases and a discussion of the localization:

1. Laminectomy is superior to a simple reduction of the deformity, since, in fractures of the arches, reduction has no certain effect on isolated fragments, and reduction alone has hastened death. 2. Reduction may be more rational when effected through the open wound of laminectomy. 3. Simple reduction is useless where there are clots or adhesions sufficient in themselves to account for the spinal disturbance. 4. In cases of cervical luxation without fracture, simple reduction has given good results. 5. It is possible to still further improve the *prognosis of reduction* in simple cervical luxations by making the reduction with the arches exposed and employing silver wire suture of the processes to prevent relapse. In consideration of the distressing prognosis in lesions of the cervical region, an operation appears *strongly indicated.* Degeneration is observed wherever the narrowing factor is *not* removed. The treatment of vertebral fractures without operation offers a chance of success only where there exists little or no disturbance of the spinal cord, such as *paralysis* of a single group of muscles, one-sided paralysis *or partial* disturbances of sensibility, etc. In all cases where the usual assemblage of symptoms indicates a severe alteration of the *cord, only* prompt operations directly afford the best chances of securing improvement or cure.

52. Dislocation of the Clavicle.—Sheldon discusses the diagnosis of the condition and the conclusion which he reaches is that operation is advisable in every case where there is complete rupture of the coracoclavicular ligaments. There is only one case reported with symptoms pointing to complete rupture that terminated favorably without operation. The most approved method of procedure is exposure of the joint by incision; drilling the clavicle and acromion; passing and tying two absorbable sutures; approximating ligaments and fascia with fine catgut and suturing the skin wound with silkworm gut. He does not believe in the use of silver wire for suturing the bone, holding that absorbable sutures are better.

53. Method of Retaining Fractured Ends in Position.—Johnson suggests the following method as valuable in retaining the ends of fractured bones in position while applying plaster casts. His method is to take two or three strips of bandage, smear them with vaselin and apply one strip around the humerus for example, above the fracture, one just over the seat of fracture and the third on the forearm just below the elbow, these being applied under anesthesia. These strips are given to two assistants, and under the surgeon's direction the upper one may be pulled back, the lower one down, and the middle one tightened to keep the bones from tilting up at that point after they have been approximated. Then he would put on a loose flannel roller from the hand to the axilla, then a sufficiency of raw cotton, and finally plaster rollers, ignoring the traction strips and putting the bandages, cotton, etc., around or over them as if they did not exist, the assistants keeping up their pull in the lines indicated. In five minutes the plaster has hardened and the bones are fixed in the position desired. These tense straps which the assistants have been pulling on might produce strangulation if left, but as they are covered with vaselin by letting go one end there is no difficulty in pulling them out from beneath the plaster, leaving a small hole, which can be easily filled up to make it neat. As soon as they are removed split the plaster down in front and bring it together loosely with the adhesive strips so as to make room for the tension from swelling of the arm. He has repeatedly used this method. He frequently keeps the splints on for the whole treatment with satisfactory results.

Louisville Monthly Journal of Medicine and Surgery.

September.

57 Glaucoma. T. C. Evans.
58 Appendicitis from the Standpoint of the Patient. Samuel G. Dabney.
59 Management of the Third Stage of Labor. Cassius D. Mansfield.
60 The Surgical Treatment of Abdominal Diseases. Louis Frank.
61 Empiricism and Medical Commercialism. D. L. Field.
62 Harshness of the Hairs. A. K. Bond.
63 *Pertussis as an Etiologic Factor in Uterine Displacements. Walter B. Jennings.

63. Pertussis and Uterine Displacements.—Jennings considers the anatomy of the uterine supports and the effects of paroxysms of pertussis on the body. He reports a case in a young woman of the athletic type who while perfectly well up to 20 years of age developed a third degree backward displacement of the uterus after an attack of pertussis. So far as it is possible to draw conclusions from the case they should be as follows:

1. Pertussis may be an exciting cause of backward displacement of the uterus. 2. The effect of the *paroxysm* would be to loosen the uterine ligaments, and muscular contraction of the abdominal muscle, *together* with a downward pressure of the diaphragm, would tend to force the uterus backward. 3. As a result of venous stasis of *all* the *organs* in the body, there would be a tendency to an increase in the weight of the uterus, and this would tend to a backward displacement.

The Post-Graduate, New York.

September.

64 Benign Ulcerations of the Bowels and Anus. Samuel G. Gant.
65 *A Study Concerning the Bacteriology of the Blood in Sepsis and the Value of Bacteriologic Blood Examination in Clinical Diagnosis. Harris A. Houghton.
66 Osseous Cysts. Carl Beck.
67 The Lymphoid Tissue of the Pharynx. Charles Graef.
68 Notes from the Clinics. (Management of Acute Suppuration of the Middle Ear, etc.) Wendell C. Phillips.

65. Bacteriology of the Blood.—Houghton reviews the literature and reports experiments and investigations, describing his methods. He concludes that the approximately normal blood contains pyogenic bacteria in a greater or less degree, their manifestation depending on other conditions. Bacteriologic examination of the blood is of little or no value in the diagnosis or prognosis or as indicating treatment. When positive results are obtained there is no assurance that the infective agent found is that which is responsible for the primary infection; or that it is not a cryptogenetic infection; or that a second examination will likewise prove positive; or where only one infective agent is found that this is the only one present; or where two are found that both are concerned in the primary infection. In cases where the results are negative we have no reason to believe that the blood is free from bacteria, or that another examination will likewise prove negative.

Occidental Medical Times, San Francisco.

September.

69 *Annual Report of the San Francisco Board of Health.
70 *The Liver Reflex. Albert Abrams.
71 Case of Poisoning by Carbon Monoxide. Kate P. Van Orden.
72 The Mysteries of Plague, Past and Present. C. N. Ellinwood.

69.—This article was noticed editorially in The Journal of October 3, p. 856.

70. The Liver Reflex.—This is described by Abrams as elicited by irritating the skin contiguous to the lower liver border, either electrically or by a spray of ether, or scratching of the skin by the finger nail or the blunt end of a pencil. The lower liver border can be observed after this maneuver to recede one-half inch or more, depending on the degree of irritation. The retraction is dependent entirely on the contractility of the organ itself and the muscle fibers in its fibrous coat. The size of the liver can also be influenced by what he has called the cardio-splanchnic phenomenon. He enters at length into the directions for percussion of the liver to elicit this reflex, and the difficulties due to the thinness of the border and the hollow organs bounding it. The patient must be instructed to take no inspiration while the body is inclined backward and light percussion is executed, otherwise there will be a downward respiratory dislocation of the liver. In practicing percussion the finger receiving the percussion blow must be firmly imbedded in the abdominal wall, otherwise it will not be directly transmitted to the liver. He points out that this reflex is more pronounced in cases of active or passive congestion. In case the liver enlargement is due to a connective tissue hyperplasia, it will be absent or only slightly present. The prognosis and treatment may be affected in both ways. The sinusoidal current is really the best irritant for eliciting the reflex.

Medical Herald, St. Joseph, Mo.

September.

73 Utility of Intestinal Antiseptics in Typhoid Fever. N. S. Davis, Jr.
74 Principles in Drainage. C. H. Mayo.
75 *Fowler's Position in Abdominal Surgery. Van Buren Knott
76 Evisceration of Eye with Implantation of Glass Vitreous vs. Enucleation. F. W. Dean.
77 Hemorrhagic Pancreatitis, with Report of a Case. A. M. Pond.
78 Treatment of Gastric Motor Insufficiency. John B. Tyrrell.
79 Traumatic Lesions of the Spine. W. W. Bowen.
80 Tendon Transplantation in the Treatment of Paralytic Deformities. Frank C. Davis.
81 Kaiser Frederick III. and His Physicians. Ralph H. Parker.

75. Fowler's Position.—Knott advocates the use of Fowler's position which, instead of draining the immune portion of the peritoneal cavity on to the upper and sensitive portion, reverses the process, and he wonders that the method was not earlier recommended in cases of septic peritonitis. He reports five cases in which it was successfully used. The theoretic assumption that in debilitated patients the elevated head position might be pernicious is not verified in his cases, as there has been no cardiac embarrassment or other symptoms referable to the position, and patients have declared that they were more comfortable with the head elevated than with it down. He has noticed also that flatus has been passed earlier and more freely and there is no increased tendency to phlebitis. The position is maintained for twenty-four hours unless some special reason for continuing it was present. The head of the bed should be raised from twenty-four to thirty inches from the floor, and an elevation of thirty inches is much better than one of twelve.

American Journal of the Medical Sciences, Philadelphia.

September.

82 *Acute Myelogenic Leukemia. Frank Billings and Joseph A. Capps.
83 Tumor of the Intercarotid Body. A Report of One Case, Together with All Cases in the Literature. Charles L. Scudder.
84 *A Study of the Physical Signs of Lobar Pneumonia. Lewis A. Connor and George E. Dodge.
85 Primary Carcinoma of the Liver. H. Gideon Wells.
86 A Résumé of Some of the Year's Literature on the Liver and Gall Bladder. Herbert S. Carter.
87 *The Relation of Certain Adenocarcinomata to Atrophic Scirrhus of the Breast. J. Clark Stewart.
88 Report of Two Cases of Ulcerative Angina and Stomatitis, Associated with the Fusiform Bacillus and Spirillum of Vincent. Jessie Weston Fisher.
89 *The "Idiopathic" or "Essential" Dropsies of Childhood. Arthur W. Fairbanks.
90 Nephropexy in a Case of Chronic Nephritis. J. Norman Henry.
91 Orthostatic Albuminuria: Report of a Case. Harvey G. Beck.
92 On the Occurrence of Ehrlich's Dimethylamidobenzaldehyde Reaction in the Urine. Charles E. Simon.
93 *Syphilis as a Cause of Chorea. L. Harrison Mettler.
94 A Brief Report of 227 Cases of Paresis. Horace Phillips.
95 *Arguments in Favor of the Existence of a Separate Center for Writing. Hermon C. Gordinier.
96 A Contribution to the Surgery of the Brain, with the Report of Two Cases of Tumors of the Cerebellum Which Were Located and on Which Operations Were Performed. William H. Hudson.

82. Acute Myelogenic Leukemia.—Billings and Capps report a case which they refer to this type and discuss the literature, reviewing eight reported cases which seem to be unmistakable. From these published cases as a basis they sum up the blood picture of acute myelogenic leukemia as follows:

> 1. Anemia, progressive and severe. 2. A large increase of white blood corpuscles (16,000 to 540,000). 3. A large proportion of the white cells (25 to 96 per cent.) made up of myelocytes, large mononuculear cells of the same size, and faintly granular large mononuculear cells (transitional cells). 4. Eosinophiles, mast cells and nucleated red corpuscles may be absent or present in varying numbers.

84. Pneumonia.—The early symptoms of lobar pneumonia are reviewed by Conner and Dodge from observations of a series of 392 cases. They notice particularly the enfeeblement of respiration among the earliest symptoms, and attribute its cause to the greatly restricted expansion of the enlarged and stiffened part of the lung. The length of time in which the area of feeble breathing was observed before the appearance of bronchial breathing varied from one day or less to five days. Harsh or exaggerated breathing occurred in 8 out of 124 cases of beginning pneumonia, which they take to signify deep-seated involvement of the structure. Râles were heard in 110 cases before the advent of bronchial breathing; about 50 per cent. were described as crepitant, most of the remainder as subcrepitant. Their experience corresponds with that of Skoda, that crepitant râles are by no means always observed. They place the physical signs of beginning pneumonia in the order of relative frequency, as: 1. A circumscribed area of feeble, indistinct breathing as compared with the breathing at the corresponding point on the other side. 2. A circumscribed area of impaired resonance, with or without a tympanic quality, obtained under similar precautions. 3. The crepitant râle. 4. A slight increase in the intensity and clearness of the vocal resonance. Bronchial breathing and bronchophony make their appearance coexistent with and indicative of complete hepatization of a larger or smaller portion of the lung tissue. In almost all the cases observed the bronchial quality first appeared during expiration. In most cases the sounds were faint, soft and of very low pitch, usually existing for about twelve hours, but occasionally for longer periods. Concerning the signs of percussion in the second stage, they find that when the consolidation affects the right lower lobe posteriorly, there is found very commonly over the middle lobe in front a strikingly deep, hyperresonant note of more or less distinctive tympanic value. This is heard in the circumscribed area in the fourth and fifth spaces within the nipple line. It has been frequently possible by it to predict the position of the consolidation before the back had been examined. The bronchial breathing usually appeared from the third to the fifth day, rarely in the first day. In four cases of undoubted pneumonia neither bronchial breathing nor bronchophony could be found at any time. The gradation of change from bronchial to normal vesicular breathing should fall in inverse order to that observed in consolidation. The relation of the disappearance of bronchial breathing to defervescence is mentioned. This occurred at various periods from before defervescence until six or seven days after, or more. They notice here in this respect three distinct groups: 1. Those in which the signs of consolidation appear one, two or three days before the temperature fall. 2. Those cases, by far the most numerous, in which beginning resolution coincided with the fall in temperature or followed it in a day or two, and in which resolution progressed rapidly and was complete within a few days or more. 3. Those cases in which with defervescence signs of complete consolidation persisted for several days or longer before the appearance of beginning resolution. There were 30 in which the signs of consolidation lasted for more than two weeks, and in one where there were no signs of consolidation for sixty days. The question of central pneumonia is discussed. The authors think the practice of applying this term to cases where signs of consolidation are late in appearing is unwarranted, and that this stage of diminished breathing in pneumonia corresponds with incomplete consolidation or engorgement limited to the interior of the lobe. They hold that true cases of central pneumonia are probably much rarer than popularly supposed. They have noticed a progressive rise and fall in the pitch of bronchial breathing and consider it related rather to the degree of consolidation than to the proximity of the consolidation to the surface.

87. **Relations Between Adenocarcinoma and Scirrhus.**—Stewart discusses the question of this relation and reports cases illustrating his views. His summary is as follows:

1. The term atrophic scirrhus is worthy of retention as describing an important clinical entity. 2. It is extremely doubtful whether such cases are benefited by operation. 3. Certain adenocarcinomata of the breast have the clinical history of the atrophic scirrhus. 4. It seems probable that if more of these tumors were studied histologically they might prove to have an adenomatous element to justify their comparative benignancy.

89. **The "Essential" Dropsies of Childhood.**—Fairbanks describes the angioneurotic edemas of childhood, reporting personal observations and reviewing the literature. He adopts the neurotic theory, holding that no one bodily cause can be regarded as essential unless it is exposure to cold. He does not recognize the close relation of the condition to urticaria, holding that the occurrence of the latter is secondary.

93. **Syphilis as a Cause of Chorea.**—Mettler reports cases and discusses syphilis as a cause. He formulates his conclusions thus:

1. Syphilis in rare instances is a cause of chorea, and should always be thought of as a possibility in the examination of every case. 2. Chorea may be the result of acquired or hereditary syphilis. 3. Most of the cases of syphilitic chorea are unilateral; belong to the prehemiplegic or posthemiplegic type of the disease; may or may not be associated with other signs of an irritative lesion; are not infrequently developed in hereditary syphilitics, and are to be attributed probably to a functional disturbance of an irritative sort in the cortical and ganglionic motor cells. 4. The existence and [illegible] forms of syphilitic chorea—the focal and [illegible] the inference that all forms of chorea are [illegible] ne or more of a multiplicity of possible factors which may disturb the functional activity of the upper motor neurons, these factors being all the way from a gross lesion down to a molecular or chemical change not demonstrable with our present means of investigation. This conclusion leads to the further conclusion that chorea is not a disease, but a mere symptom. 5. Syphilis, when determined as the cause of a case of chorea, should lead to the prompt and thorough treatment of the case as one of syphilis and not chorea.

95. **The Writing Center.**—The existence of a separate center for writing is maintained by Gordinier, who reports a case which seems to prove the existence of a separate and distinct cortical center for writing, having the same relation to writing movements as the motor speech center has to speech movements. This center is located at the base of the second left frontal convolution for the right-handed. Destruction of this center produces pure motor agraphia without aphasia or paralysis of either arm. The case is illustrated, showing the lesion in the place indicated, and seems to be fairly conclusive as far as a single case can be.

Journal of Advanced Therapeutics, New York.

September.

97 The Therapeutics of the Continuous Current. Margaret A Cleaves.
98 Current Differentiation. A. D. Rockwell.
99 *Rheumatoid Arthritis Francis B Bishop.
100 Answers and Objections to Dr. A. A. O'Neill's Paper, "X Ray Era,"on Electrolysis in Urethral Strictures. Robert Newman.
101 The Electrical Treatment of a Case of Fibroid Uterus with Disease of the Right Ovary and Tube; Symptomatic Cure. Amédée Granger.
102 The Treatment of Chronic Diseases by Physical Therapeutics, Through the Sympathetic Nervous System. Albert C Geyser.

99. **Rheumatoid Arthritis.**—Bishop holds that this is a disease of the nervous system. The treatment which he would use for the earlier cases is the application of a surging high potential alternating current on each side of the vertebræ for five or six times. After this he treats the liver, kidney region, spleen and lymphatic vessels and glands as well as the joints. This alternating surging current produces an efficient and very deeply penetrating spark, which is practically painless. When treatment has been begun early enough decided improvement has taken place. When it cures it is gradual and progressive, but may require months. He insists on the importance of early diagnosis. Trophic changes are first in the nerve centers, second in the nerves, and lastly in the muscles and joints.

Annals of Gynecology and Pediatry, Boston.

September.

103 Cysts of the Kidney. Augustin H. Goelet.
104 *The Toilet of the Peritoneum in Tuberculous Peritonitis. A. J. Ochsner.
105 The Remote Effects of Latent Gonorrhea in the Female. W. E. Fitch.

104. **Tuberculous Peritonitis.**—Ochsner has tabulated 32 cases of tuberculous peritonitis treated in one hospital, showing the immediate and late results. Since then he has operated on 8 cases, and from all these, though the number is small, he thinks the following conclusions concerning the toilet of the peritoneum in these cases are warranted:

1. In the absence of ascitic fluid in the peritoneal cavity, the diseased tissues may be removed with safety if the section is made entirely in healthy tissue. 2. In the presence of ascitic fluid the latter should be evacuated and the abdominal cavity drained. 3. Great care should be exercised in making the intra-abdominal manipulations and examination not to cause any abrasions. 4. Adhesions should not be disturbed. 5. The less the tissues are manipulated, the better will be the results. 6. Manipulations of the infected pelvic organs—uterus, ovaries, fallopian tubes—is less harmful than manipulations of the infected intestines.

Illinois Medical Journal, Springfield.

September.

106 The [illegible] Relation to Early Surgical Op[illegible]
107 The [illegible] J. E. Coleman.
108 *Tons[illegible] R. Ryan.
109 Accidents of the Antrum, with Special Reference to a Peculiar Case. E. V. D. Morris.
110 The Treatment of Eye Injuries. H. Gradle.
111 The Surgical Treatment of Trachoma, with a Report of Cases and Demonstration of Methods. J. Whitefield Smith.
112 *Management of Crossed-eyes in Children. Willis O. Nance.
113 *The Danger That May Lurk in Blind Eyes. Cassius D. Wescott.
114 Gastrostomy by the Franck Method. Joseph B. Bacon.
115 *Vibration Massage in the Treatment of Chronic Prostatitis. Louis E. Schmidt.

108. **Tonsillar Hemorrhage.**—The prevalent opinion that tonsillar hemorrhage is seldom dangerous is refuted by Ryan, who reports cases where very serious trouble and danger followed operation. He reviews the statements of others and shows that it is clear that alarming cases do sometimes occur, though as yet no fatal cases have been recorded. The dense fibrous tonsil of the young adult seems to produce the most dangerous symptoms. He would put the various methods in the following order in the order of their danger: 1. Removal by bistoury, an almost obsolete method. 2. Removal by the tonsillotome, which elevates the tonsil. 3. Removal by the flat tonsillotome as done by McKenzie. 4. Removal by the galvanocautery snare. 5. Removal by the cold snare. 6. Dissection or tonsillectomy by the galvanocautery knife, requiring several sittings. He would hesitate now about removing by amputation the fibrous tonsil of people over 25 years of age, and especially if it is densely fibrous.

112.—This article has appeared elsewhere. See The Journal, August 1, ¶39, p. 337.

113.—Ibid., September 12, ¶16. p. 684.

115.—Ibid., ¶65, p. 687.

Northwestern Lancet, Minneapolis.

September 1.

116 Eye Strain from the Viewpoint of the General Practitioner. Edward B. Taylor
117 The Sequels of Appendicitis. James E. Moore.
118 Report of a Case of Perforative Typhoid Ulcer; Diffuse Suppurative Peritonitis; with Operation and Recovery. H. B. Sweetser.
119 The Common Mind; Has It an Existence, and to What Extent Can It Be Depended on in the Discussion of Public Questions? Edward J. Brown.

Albany Medical Annals.

September.

120 Hygiene in the Prevention and Cure of Disease. George Haner.
121 Prevention of Smallpox. F. C. Curtis.
122 Some Sequelæ of Smallpox. Joseph D. Craig.

Canada Lancet, Toronto.

September.

123 Address, Canadian Medical Association, London. W. H. Moorehouse.
124 The Cardiac Aspect of Arteriosclerosis. T. W. G. McKay.
125 The Renal Aspect of Arteriosclerosis. John Caven.
126 Cerebral Aspect of Arteriosclerosis. H. A. McCallum.
127 Eye Symptoms in Arteriosclerosis. J. C. Connell.
128 The Therapeutics of Arteriosclerosis. John L. Davison.
129 Some Business Aspects of Medical Practice. N. A. Powell.
130 Intoxication in Appendicitis. Edward Hornibrook.

Iowa Medical Journal, Des Moines.

September 15.

131 Diagnosis and Treatment of Typhoid Fever. L. W. Littig.
132 Pathology and Bacteriology of Typhoid Fever. Charles H. Hoffman.
133 Observations and Impressions of Medicine and Medical Men Abroad. G. E. Crawford.

Toledo Medical and Surgical Reporter.

September.

134 Antistreptococcic Serum in Puerperal Septicemia. Claren S. Miller.

135 The Care of Inebriates. E. H. Rorick.
136 Injuries to the Nose and Immediate Treatment. George W. Spohn.
137 Scientific Work in Ohio's State Medical Institutions. A. P. Ohlmacher.

New Orleans Medical and Surgical Journal.

September.

138 History of Maritime Quarantine in Louisiana Against Yellow Fever. Quitman Kohnke.
139 Boon and Bane. William L. Rabe.
140 Pneumogastric Sedatives. William F. Waugh.

New Yorker medicinische Monatschrift.

August.

141 Zur Behandlung einiger chronischer Gelenkleiden (Treatment of Certain Chronic Joint Diseases). Max Schüller.

Medical Bulletin, Philadelphia.

September.

142 Vesicular Emphysema; Valvular Disease of the Heart. J. V. Shoemaker.
143 Carbuncle. William L. Rodman.
144 The Treatment of Asthma. George W. Pfromm.
145 Herpes Zoster of the Neck, with Temporary Glycosuria Consecutive to Angina. M. E. Rouyer.

Interstate Medical Journal, St. Louis.

September.

146 Additional Cases in Which the Author's Silver Filigree Was Used for the Radical Cure of Abdominal Hernia. William Bartlett.
147 Diagnosis of Syphilis of the Eye. Joseph W. Sherer.
148 Ileo-colitis. L. L. Meanes.
149 A Case of Sodium Chlorid Poisoning in a Child. John Zahorsky.
150 Case of Multiple Neuritis Following Mumps. John Zahorsky.
151 Influenza Otitis. Algernon S. Barnes, Jr.

Washington Medical Annals.

September.

152 Rheumatoid Arthritis. Francis B. Bishop.
153 Case of Enucleation of Eyeball Which Had Been Injured by a Piece of Steel Penetrating the Eye and Causing Sympathetic Irritation; Implantation of Gold Ball in Tenon's Capsule. E. Oliver Belt.
154 Case of Renal Calculus. A. A. Snyder.
155 Two Cases of Fracture of Skull by Baseball Bats. A. A. Snyder.
156 Case of Myxedema in a Child Three Years Old. G. N. Acker.
157 Cases of Early Carcinomata and Fibromata of the Uterus, Ovarian Fibroids and Umbilical Hernia. J. Wesley Bovée.
158 Clinical Notes of Three Cases of Cesarean Section and Two of Basiotripsy. Henry D. Fry.
159 Case of Fibroid Tumor of Left Broad Ligament. Duff G. Lewis.
160 Case of Cholelithiasis. A. A. Snyder.

Providence Medical Journal.

September.

161 The Community and Tuberculosis. Jay Perkins.
162 Catheterization of the Ureters. John W. Keefe.
163 A Case of Submucous Fibroid, Complicating Labor and the Puerperium, with Retained Placenta. A Case of Rupture of the Uterus. H. G. Partridge.

Woman's Medical Journal, Toledo.

August.

164 The Prevention of Insanity. Lena A. Beach.
165 Discussion of Prevention of Insanity. Anne Burnett.
166 Physical Culture and Manual Training in Our Schools. Edith Gould Fosnes.
167 Ileo-colitis. Lena L. Meanes.
168 Children and Their Teeth. Alice M. Steeves.
169 Atropin in Cholera Infantum. William F. Waugh.

Bulletin of the Kentucky State Medical Association, Louisville.

July.

170 Some Things the Obstetrician May Do to Assist the Lying-in Woman, and Some Things that He Had Better Not Do. T. J. Shoemaker.
171 Mechanical Device for Protecting the Perineum. E. J. Brown.
172 The Mechanism of Occipito-Posterior Positions. Walker B. Gossett.
173 Anesthetics. C. H. Todd.

Medical Examiner and Practitioner, New York.

August.

174 Studies in Centenarianism. John Marshall French.
175 The Medical and Social Aspects of Child Labor. Frederick L. Hoffman.
176 A Study on Light. J. Mount Bleyer.

New England Medical Monthly, Danbury, Conn.

September.

177 Intravenous Collargolum Injections in Septic Affections. Hermann Schmidt.

Alabama Medical Journal, Birmingham.

September.

178 Summer Diarrhea in Children. J. Ross Snyder.
179 Address, Medical Association of the State of Alabama. Lewis C. Morris.
180 The Treatment of Fracture-Dislocations of the Spine, with Injury to the Spinal Cord. W. W. Richardson.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

September 19.

1 *A Discussion on Disposal of Excreta in the Tropics. W. J. Simpson *and others.*
2 *Sprue: Primary and Secondary. P. W. Bassett-Smith.
3 Malaria: The Mode of Entry of the Spore Into the Red Corpuscle. Cuthbert Christy.
4 *Discussion on Trypanosomiasis. Patrick Manson and others.
5 Five Cases of Abscess of the Liver. P. W. Bassett-Smith.
6 Liver Abscess, with Ten Cases. James Cantlie.
7 *The Pathology of Acute Rheumatism and Allied Conditions. E. W. A. Walker and J. Henry Ryffel.

1. **Disposal of Excreta in the Tropics.**—Simpson advocates the use of water-tight and isolated cesspools where surface contamination is impossible and subsequently, after fermentation, the employment of the excreta for fertilization and gives his reasons. In the early stages the excreta are protected from flies, and in the feces of vegetable eaters is a large amount of undigested vegetable matter and cellulose which are more thoroughly broken up by anaërobic than by aërobic organisms.

In the subsequent discussion Rogers gives the results of experiments as to the effect of the septic tank on the life of various pathogenic organisms and, as far as his results go, they show that the septic tank process is inimical to most of the pathogenic organisms, including the cholera bacillus, staphylococcus, streptococcus, typhoid bacillus, Malta fever germ, and excepting only the anthrax bacillus. On the other hand even small quantities of effluent from the tanks showed both the *Bacillus enteritidis sporogenes* and streptococci, and its subsequent discharge through filters and then over a small piece of land with subsoil drainage failed to free it from these organisms and from a large number of colon bacilli. It would not be safe, therefore, to allow the water to contaminate water used for drinking.

2. **Sprue.**—Bassett-Smith disagrees with the American surgeons in not considering sprue a sequel of dysentery in all cases. He reports cases with blood findings and notices particularly the characteristic anemia which is close to that of pernicious anemia except that the hemoglobin value of the cells is also reduced and megaloblasts are not present. The cardinal points in coming to a diagnosis are irregular and chronic diarrhea with dyspepsia causing flatulent distension of the abdomen, the occurrence of fermenting offensive stools which in chronic cases become pasty, clay-colored and very abundant, progressive emaciation, extreme secondary anemia, and changes in the buccal mucous membrane with or without the production of an aphthous condition.

4. **Trypanosomiasis and Sleeping Sickness.**—The discussion on trypanosomiasis was opened by Patrick Manson, who notes that the disease is milder in the native than in the European. In the latter there is irregular undulant fever, peculiar circinate erythema and such eye symptoms as choroiditis and iritis. Manson objects to the trypanosoma being considered the germ of sleeping sickness.

Christy describes the distribution of sleeping sickness along the Northern and Western portion of the Victoria Nyanza Lake showing that it is rapidly advancing, though its infecting area seems to be confined to within ten miles of the lake shore and corresponds rather with the tsetse fly distribution.

Dutton and Todd find that the disease extends well up the Gambia River. It seems to be mild in the natives. Its diagnosis is clinically impossible. Experimental inoculations of animals show the horse parasite to be more pathogenic than the human variety.

7. **Rheumatism.**—Walker and Ryffel refer to an earlier communication by Walker and Beaton in which they reported the discovery of a micro-organism associated with acute rheumatism to which they venture to give the distinctive term *Micrococcus rheumaticus*, differing in many respects from other streptococci. Attention is here called to the production of formic acid by this micrococcus and the following provisional statements are made:

1. The *Micrococcus rheumaticus* produces formic acid in very considerable quantity, and also at least one other acid of the fatty

acid series. 2. The acid (formic) is present not only in the filtered cultures of the organism, but it can also be extracted from the bodies of the micro-organisms themselves. The washed micrococci contain, in addition to formic acid, at least one of the higher fatty acids. 3. Ordinary streptococci, such as a streptococcus isolated from a case of erysipelas, only give rise to a small quantity of formic acid, so far as our experiments at present go. This observation may constitute a means of differentiation between the rheumatic micro-organism and other members of the streptococcus group. 4. Formic acid and probably another fatty acid are present in the urine during the course of acute rheumatism in appreciable amounts. From normal urine formic acid is either altogether absent or occurs in traces only. 5. Under the salicylic acid treatment of rheumatic fever formic acid is, so far as we have been able to investigate, reduced in quantity in the urine of the patient. 6. Formic acid is obtainable from the tissues of an animal (rabbit) suffering from acute arthritis due to the inoculation of the micro-organism.

They think formic acid is formed by the micro-organism, by oxidation of sacrolactic acid into formic and acetic acids. They remark that the connection of formic acid with the activity of the rheumatic micrococcus is of considerable interest in relation to the notion prevalent in county districts that bee-keepers are free from rheumatism. These individuals must necessarily be frequently subjected to the action of formic acid.

The Lancet, London.

September 19.

8 *The Artificial Feeding of Infants. Robert Hutchison.
9 A Case of Abscess of the Temporo-sphenoidal Lobe Presenting Symptoms of "Amnesic Aphasia"; Operation; Recovery. R. Lawford Knaggs.
10 Case of Aneurism of the Abdominal Aorta Treated by the Introduction of Silver Wire, with a Description of Instruments Invented and Constructed by Mr. G. H. Colt to Facilitate the Introduction of Wire in Aneurisms. D'Arcy Power and G. H. Colt.
11 A Case of Malignant Disease Following Splenic Anemia. C. H. Sedgwick.
12 A Case of Subacute Indurative Pneumonia. O. K. Williamson and J. G. Emanuel.
13 *On the Occurrence and Significance of Cutaneous Hyperalgesia in Appendicitis. James Sherren.
14 Defects in the Auricular Septum. Frank E. Tylecote.
15 *Tuberculosis and Cancer in New Zealand. W. J. Barclay.

8. Infant Feeding.—Hutchison summarizes as follows:

> 1. The first essential . . . is a definite plan on which to go and to avoid haphazard procedures. 2. Diluted cow's milk, condensed milk and peptonized milk may be regarded as the positive, comparative and superlative of digestibility respectively, and should be tried in that order until the digestive power of the child is suited. . . . 3. Periodic weighing of the child is the only test of the success or failure of the food selected. 4. In cases in which even peptonized milk fails to give good results great benefit often follows the administration of grey powder, even in cases in which there is no reason to suspect a syphilitic taint. 5. In spite of all care in the use of the above methods there remains a residuum of cases in which progressive wasting persists. Many of these seem to be babies who are unable to digest the casein of cow's milk in any form. 6. In such a case one should try to procure a wet nurse for the child, and, failing that, one must eliminate casein from the diet by making whey the basis of the feeding mixture. 7. The use of a patent food as the sole article of diet for a baby is rarely if ever necessary so long as cow's milk can be obtained, either fresh or condensed. 8. If a child is unable to digest much cow's milk it is often worth while to try the effect of adding a little starchy food to the diet even at an early age, for inability to digest milk appears to be sometimes accompanied by an unusual capacity for the conversion of starch.

13. Appendicitis.—Sherren notes the significance of cutaneous hyperalgesia in appendicitis and illustrates it by schematic diagrams and cases. He concludes:

> 1. Cutaneous hyperalgesia is probably present at some time during all first attacks of appendicitis, except, perhaps, in the fulminating type, and depends on tension within the appendix. 2. It may be absent in attacks after the first, if the first attack was of sufficient severity to destroy nerve tissue in the wall of the appendix. 3. When present in attacks subsequent to the first it often persists long after all other signs of the disease have gone, owing to the tension within the appendix being kept up by the presence of a stricture. 4. It gradually disappears during convalescence as the other signs of the disease clear up. 5. Disappearance of cutaneous hyperalgesia without improvement in the general condition of the patient is a sign of perforation or gangrene of the appendix, and should be a signal for immediate operation. 6. The presence of cutaneous hyperalgesia is no contraindication to operation. Abscesses may form and general peritonitis may develop while it is present. 7. Its absence, on the other hand, is of great importance. Absence of cutaneous hyperalgesia, the patient coming under observation early in the first attack of appendicitis, is a sign of gangrene of the appendix unless the case is obviously a mild one and the patient is rapidly getting well. 8. Cutaneous hyperalgesia is, as a rule, absent in cases of abscess of the appendix. 9. The age of the patient and the position of the appendix have no influence on the cutaneous hyperalgesia. 10. It is occasionally of use as an aid to the diagnosis of appendicitis.

15. Tuberculosis and Cancer in New Zealand.—Barclay gives a statistical study determining certain facts: 1. The death rate from tuberculosis is exceedingly low in New Zealand—only about one-half the English rate. 2. Cancer prevalence, on the other hand, seems to be practically equal to that in England. He concludes that the conditions favoring cancer are present to an equal extent in both countries.

Indian Medical Gazette, Calcutta.

September.

16 *Extraction of Cataract in the Government Ophthalmic Hospital, Madras. T. H. Pope.
17 Some Cases of Labor in Heart Disease. Clayton Lane.
18 An Account of a Race of Idiots Found in the Punjab, Commonly Known as "Shah Daula's Mice." G. F. W. Ewens.
19 *Further Notes on Experiments on the Pathology and Treatment of Malignant Disease. E. R. Rost.

16. Cataract.—Pope has experimented with avoiding bandaging of the eye after operations, simply protecting it by a double eye-shade tied firmly around the head. By raising the head the patient is able to see. From his experience with wounds of the cornea, he thinks it a necessity to avoid bandaging in all cases of uncomplicated inflammation and injuries of the cornea and conjunctiva and to treat them simply by thorough cleansing with antiseptic washes followed by the application of an effective shade. The procedure has shown itself to be comparatively free from objections in hospital practice and he gives a history of the first twelve cases. The operation he employs for cataract is what is called the Drake-Brockman method. Instead of rupturing the capsule by a cystotome, Drake-Brockman used a Bowman's stop-needle and began by tearing the capsule of the lens. A full account was given in the *Indian Medical Gazette*, June, 1901.

19. Cancer.—Rost has seen benefit from the following treatment: A strict diabetic diet, two ounces of salt daily, rubbing salt ointment into the body and the local application of dilute hydrochloric acid, 2 per cent. In several cases there was a daily rise of temperature which gradually subsided as the treatment progressed. In some cases edema occurred around the growth, but this also subsided as the treatment was continued.

Presse Medicale, Paris.

20 (No. 71.) Les albuminuries curables. Albuminuries fonctionelles. G. Lyon.
21 La formation de la lymphe. M. Loeper.
22 L'alcool dans l'alimentation. E. Poher.
23 (No. 72.) Le traitement électrique de la constipation habituelle et de la colite muco-membraneuse. L. Delherm.
24 Grippe et paludisme à Madagascar. Fontoynont.
25 Les indications op. dans le traitement de l'appendicite. M. Gaudin.
26 *La céliotomie abdominale sub-médiane. L. Longuet.
27 (No. 73.) Les délirants des hôpitaux. E. Régis.
28 (No. 74.) Glossite et stomatite à streptocoques observées à Madagascar. Fontoynont.
29 Actinomycose. L. Dor.
30 Panaris actinomycosique. L. Thévenot.

26. Submedian Laparotomy.—Longuet advocates what he calls submedian abdominal celiotomy, claiming that it is the shortest route, the line of the incision is always straight and rectilinear and is in accordance with the surgical principle to utilize a muscle as a support. Biologically it offers a greater vitality on the part of the lips of the wound than any other incision; the entire muscular functions of one side of the abdominal wall are left intact; the preservation of the linea alba confers greater solidity, and the interposition between the tiers of the suture of a sound, vigorous and intact muscle guarantees against post-operative hernia. In case of emergency operations in which haste is imperative the ordinary incision may be preferable, but for gynecologic operations in general he regards the submedian as a great improvement over the median laparotomy. His incision is about 12 cm. long, on a radius from the top of the symphysis, close to the median line at the base and diverging from it to about 3 cm. as the umbilicus is approached. The rectus has a tendency to retract to one side and is drawn further out of the way.

Revue de Chirurgie, Paris.

Last indexed page 639.

31 (XXIII, No. 8.) *De quelques complications de l'anus contre nature et de leur traitement. H. Géraud.
32 *De la dilatation ampullaire des veines. P. Guibal. (Commenced in No. 6.)
33 (No. 9.) Abcès tuberculeux intrahépatique et périhépatite tuberculeuse. M. Auvray.
34 Note sur un cas de rétraction de l'aponévrose palmaire consécutive à une fracture de l'avant-bras. C. Féré and R. Demanche.
35 *Contribution à l'étude du rheumatisme tuberculeux dans les cas de lupus willanique ou de tuberculides. Rouveyron.
36 *Les tumeurs du corpuscle rétro-carotidien. P. Reclus and M. Chevassu. (Commenced in No. 8.)

31. **Complications of Artificial Anus.**—Géraud observes that if prolapse of the mucosa through an artificial anus becomes annoying, the protruding mucosa should be excised. He has found 25 cases on record in which there was prolapse of the intestine through the anus, and describes 2 rather remarkable unpublished cases. He cautions that treatment should be prophylactic. The patient should be told to defecate reclining and without effort on the part of the abdominal muscles. Violent efforts, fatigue and dietary indiscretions should also be avoided. He regards the Saxtorph appliance as best adapted to allow passage of gases while preventing prolapse. In one of his personal cases there was eversion or evagination of the cecum, ileo-cecal valve and the orifice of the appendix. The protruding mass was fully 15 cm. long and every twenty-five to thirty minutes the ileo-cecal valve dilated and allowed the passage of some soft matters, similar to what is observed in the ureters emptying into the bladder. The mere fact of drinking a glass of milk at any time during the day caused evacuation of matters. Peas and beans emerged the day after they were eaten, apparently unmodified. In his second case there was double prolapse of the sigmoid flexure with a strangulated hernia of the small intestine into the prolapsed intestinal mass, thus forming an enormous T protruding from the artificial anus with a loop of small intestine incarcerated in the stem. Treatment consisted in removal of the loops of both intestines and the square of abdominal wall containing the anus. The specimen thus obtained is now in Terrier's museum. The protruding portion of the large intestine measures 20 cm. in length by 5 in diameter, and on the inner side four stumps of intestine project from the anus.

32. **Dilatation of Veins.**—Guibal does not believe in abstention from treatment in case of ampullary dilatation of the veins, as there is always danger of infection and coagulation of the contents. The possibility of fatal embolism has been proven by several instances on record, as also of hemorrhage and suppuration. Elastic stockings are useful for elderly persons or those with sedentary habits or who refuse operative treatment. Under other conditions, especially when the cystic dilatation is increasing or is causing serious trouble or is complicated with phlebitis, the tumor and adjacent veins should be excised between ligatures far into normal tissue. This puts an end to the tumor and benefits or cures the superficial varices by suppressing the reflux of blood. He reviews a material of 52 cases collected in the literature or personally observed, giving the particulars of each case.

35. **Tuberculous Rheumatism.**—Bouveyron studies the subject of the rheumatism complicating cutaneous tuberculous lesions to which attention has not previously been directed. He has observed 14 cases of rheumatism in persons affected with lupus with or without accompanying pulmonary tuberculosis. They were noted among 49 cases of lupus in h service during the last six months. There were no evid of rheumatism among the 14 cases of lupus in children, bu was pronounced in 5 of the 12 men with severe lupus and 7 of the 18 women. Rheumatism was thus manifest in 12 ou of 30 cases of rebellious and mutilating lupus in adults, but was rare in adults with mild forms of lupus. The arthralgic form, with or without effusion or tumefaction of the joint, was most frequent, occurring in 8 out of the 12. These arthralgias are usually moderately painful, torpid, tenacious and rebellious to all the classic methods of treatment. They sometimes disappear for a time and then recur in the same or another joint. They may improve without apparent cause or under the influence of a febrile affection. The condition of the accompanying lupus does not seem to affect them nor the general health of the individual in question. The ostealgic or hyperostosic form was encountered only in women, and in 4 out of the 7 cases in this class. Two other women with tuberculides also exhibited painful hyperostosis, which raises the proportion to 6 out of 9. In one case of ostealgia of the two femurs there did not seem to be hyperostosis. In 3 out of 12 cases the rheumatism assumed the form of hydrarthrosis. In one of his 2 cases of tuberculides the rheumatism assumed the form of multiple painful hyperostosis, and in the other of hyperostosis, spina ventosa and polyarthritis so acute and painful that it simulated true rheumatism. The general condition of both these patients was very poor. Bouveyron adds that the limitation, recurrences and fixity of the rheumatismal manifestations suggest some local germination and reviviscence rather than general toxic action from a distance. Poncet, who first described the rheumatism of tuberculosis, used to say that there is nothing to prove that the action of the tubercle bacillus is restricted to the formation of granulations, tubercles and fungous growths. This seems to be accepted as an article of faith, but no one to date has demonstrated that this anatomo-pathologic signature is absolutely necessary, and that Koch's bacillus may not determine an ordinary inflammatory process when ensconced in the bone or synovial membranes.

36. **Tumors of the Intercarotid Body.**—Reclus and Chevassu describe a case of a tumor which shelled out from the bifurcation of the common carotid without difficulty, and state that it is the eleventh on record. They remark that the possibility of a tumor in this intercarotid body should be borne in mind when a single tumor is observed in the carotid region, rather soft, pulsating without expansion, and developing very slowly.

44 *Malakoplakia of the Bladder. v. Hansemann.—Ueber Malakoplakie der Harnblase.
45 Fall von akuter Leukämie. A. Januszkiewicz (Kiev).
46 Fall von multiplem Myelom mit diffuser Verbreitung im Knochenmark. A. J. Abrikosoff (Moscow).
47 Ueber die Histogenese des Netzhaut-Glioms (of glioma of retina). V. Scaffidi.
48 Fall von Sarkom der Dura Mater und über dessen Beziehungen zu eine -mn. L. Lichtwitz (Breslau).
49 Fall von des Herzens. E. Schreiber.
50 Congenit des Scrotum. W. Pinkus.

40 to 42. Disturbances in Development of Kidney.—Meyer discovered a peculiar irregular appearance in the kidneys of a female infant nine weeks old, who presented other deformities. Parts of the kidneys seemed to be normal, while in other parts there were no convoluted tubules to be found, although the Malpighi corpuscles and the straight tubules were normal. He also examined pathologic kidneys of calves and kidney cysts in children and adults. The findings in all corroborate the assumption that the canal system of the kidney develops from two separate foundations or *Anlagen*. The researches of Schenkl and Beck at the veterinary pathologic institute at Berne also confirm this view.

43. Accessory Pancreas.—Thorel found the accessory pancreas in the stomach or intestine in 3 cases; in one it was double, and one pancreas was in the jejunum and the other in its mesentery. He has encountered 7 cases of accessory pancreas in all, and in each one, with the exception of the last mentioned, the organ had an opening into the intestine. Langerhans' islands were absent in nearly every one. He ascribes the origin of these accessory organs to displacement of germinal tissue.

44. Malakoplakia of the Bladder.—Hansemann found a number of peculiar, yellowish, flattish fungus-like growths in the mucosa of the bladder and of the dilated ureters in the 2 cases described. They had not caused any clinical symptoms, although some were ulcerated and confluent. He does not know how to classify the affection and proposes the descriptive term of malakoplakia vesicæ, from the Greek word malako, soft, and plakia, patch.

Centralblatt f. Gynaekologie, Leipsic.

Last indexed page 642.

51 (XXVII, No. 30.) *Fall von gleichzeitige extra-uterine und intra-uterine Gravidität. Geyl (Ginneken).
52 (No. 31.) Zur normalen Struktur des Syncytiums. O. O. Fellner (Schauta's clinic, Vienna).
53 *Large-sized Funnel Pessaries Against Genital Prolapse. Schatz (Rostock).—Trichter-Pessarien, etc.
54 *Is Injury of the Round Ligament in Herniotomies Followed by Retrodeviation of Uterus? S. Goldner.—Hat die Verletzung des Lig. rotund. bei Herniotomien Retrodeviationen des Uterus zur *Folge?*
55 (No 32.) *Drawbacks of Raising the Pelvis K. Franz (Halle).—Nachtheile der Beckenhochlagerung.
56 *Zur Kenntnis der Tuben-Graviditat. E. G. Orthmann.
57 *Apparatus for Supply of Sterile Water at All Times. N. S Ivanoff (Moscow).—Apparat zur Gewinnung und Ausnutzung sterilen Wassers.
58 (No. 33.) *Detachment of Vagina and Muscular Floor of Pelvis as Cause of Prolapse. Schatz (Rostock).—Ueber die Abreissungen der Scheide und des musk. Beckenbodens als Ursachen
59 Two High F v. Wenczel (Budapest) —Zwei ho
60 Beitrag zur t subkutanen Strychnin-Injektioner
61 (No 34.) Ovaries Accompanying Vesicular Mole. L. Pick.—Zur Frage der Eierstocksveränderungen bei Blasenmole.
62 Hysterotomia vaginalis anterior infolge hochgradiger Rigidität der Cervix, compliziert mit einem Riss durch unteres Uterin-Segment und Parametrium. W. Ruhl.
63 (No. 35.) Zur Technik vaginaler Operations-Methoden. F. Mainzer.
64 Two Cases of Rupture of Uterus. E. Puppel.—Zur Lehre von den penetrierenden Zerreissungen der weichen Geburtswege intra partum.

51. Twin Pregnancy Intra- and Extra-Uterine.—Geyl remarks that not a single case similar to the one he describes was found by G. Zinke in his compilation of 88 cases of simultaneous intra- and extra-uterine pregnancies during the last two centuries. The case is distinguished by the fact that the fetus in the uterus died about the third week of its development while the extra-uterine fetus, with placenta attached to the floor of the pelvis, continued to develop normally until about the fourth month. The patient succumbed to hemorrhage.

53. Funnel Pessary.—Schatz proclaims that his funnel pessaries have rendered excellent service in more than 300 cases, and possess several advantages over all others in use. They are shaped like a funnel with all the edges well rounded, but are not hollow, having merely a small passage through the center to allow escape of secretions. They separate vertically into halves and each half is inserted separately. The halves fit together spontaneously and support the parts in genital prolapse and in cases of urinary incontinence. The patients soon learn to insert and remove the pessary themselves, as he insists on its being removed every night, the vagina cleansed, the pessary sterilized and replaced next morning. He has the pessaries made in ten sizes to fit all conditions, the stem the same length in all.

54. Is Injury of Round Ligament in Herniotomies Followed by Retrodeviation?—Gold answers this question in the negative.

55. Drawbacks of Raising the Pelvis.—Kraske has stated that the Trendelenburg position caused a tendency to paralysis of the anterior tibialis, and to emphysema of abdominal walls, both of which can be easily avoided. He further asserted that he had witnessed severe disturbances in circulation in 2 corpulent subjects who had exhibited symptoms of myocarditis previous to the operation. In a few other exceptional cases he has observed intestinal occlusion, aspiration of stomach contents and apoplexy, all of which he attributed to the raising of the pelvis. Franz reports that none of these mishaps have been noted at the Halle clinic in the course of 745 laparotomies, but he calls attention to a disadvantage of the position hitherto unappreciated. This is the diminished abdominal respiration during the time that the pelvis is raised. The respiration in the lungs does not compensate for it, as he shows by respiration curves, and consequently the patient suffers from abnormally deficient respiration. He further announces that he has found that bronchitis was four times more frequent after an ether narcosis when the operation had been performed with the pelvis raised than when the patient had been simply reclining. The cases of bronchitis after chloroform narcosis were likewise more numerous, but not to the same extent as with ether. The subject does not get his normal supply of oxygen while in the Trendelenburg position, and this must aid in depressing the general condition. This fact may even explain why patients bear a vaginal operation so much better than a laparotomy.

56. Tubal Pregnancy.—Orthmann reviews his experience with 45 cases, and relates the particulars of 8 particularly interesting ones. Four of the total number died. In 2 the tubal pregnancy occurred more than once.

57. Apparatus for Sterile Water Supply.—The apparatus consists of a double cylinder somewhat on the principle of a Russian samovar or tea urn. It is made for convenient handling with a capacity of about a quart and a half, but can be as large as required. The spout is long and turns up and over so that the nose of the spout fits into the apparatus near the top and is sterilized with the water. When ready to use the spout is pulled down and can be adjusted at any angle by a thumb screw. The water is heated with live coals like a samovar or by standing the apparatus on the stove.

58. Lacerations of Vagina and of Muscular Floor of Pelvis as Cause of Prolapse of Uterus.—Schatz proclaimed as long ago as 1883 that lacerations of the muscular floor of the pelvis during childbirth were a frequent cause of prolapse later. He states that no one paid any attention to his remarks on the subject except in North America. In the meantime he has collected further data and now announces that his assertions were not sweeping enough, and that detachment of the vagina is a certain and frequent source of prolapse. He describes the anatomic conditions in detail, showing that the true conditions do not seem to be appreciated in the text-books. During childbirth the vagina is liable to become detached either by the bearing down of the woman or by the direct action of the emerging fetus. The anterior wall of the vagina usually escapes, but the posterior wall is liable to become detached, and even to be slit in one or more places, and the muscular attachments are wrenched out, thus depriving the vagina of its power of transverse elastic contraction.

Deutsche med. Wochenschrift, Berlin and Leipsic.

65 (XXIX, No. 38.) *Zur Physiologie und Pharmako-Dynamik der Kieselsaure (silicic acid). H. Schulz.
66 Mode of Dissemination of Diphtheria. K. E. Büsing.—Zur Verbreitungsweise der Diphtherie.
67 Roller Forceps in Treatment of Trachoma. J. Hoppe (Cologne).—Die Trachom-Behandlung mittelst der Knapp'schen Rollzange.
68 Ueber ammoniakalische Reaktion des Harns bei Phosphaturie, sowie über Phosphaturie und Ammoniurie als objektive Symptome der Neurasthenie. A. Freudenberg.
69 Conclusion of Report on Foot-and-Mouth Disease. Loeffler.

65. **Physiologic and Pharmacologic Action of Silicic Acid.**—Schulz protests against the general assumption that silicic acid is a comparatively insignificant substance from the standpoints of physiology and pharmacology. The respiration and vascular system did not seem to be affected, but ingestion of small amounts of silicic acid caused marked derangement of the nervous system. Headache occurred, general or local, sometimes accompanied by vertigo. The eyes burned and smarted. In some of the tests the subjects complained of somnolence with inability to concentrate their attention; others became nervous and irritable; the gait was uncertain and the hands trembled. A cutaneous reaction resembling acne pustules or a papulous exanthem was also noted, and hyperidrosis with acid sweat and desquamation. The hair and beard displayed a tendency to drop out, and the nails seemed to grow faster. The digestive tract reacted to the acid with flatulence and colic, rumblings and increased desires for stool. Constipation alternated with diarrhea, and the stools were remarkably yellow, both in man and animals. There was no diuresis except when the acid had been taken for a long time. Polyuria developed with smarting during urination in some of the subjects, while in others there was retention, the urine concentrated and reddish until diuresis became established. In all the tests the legs felt as if weighted with lead and were easily fatigued. Dull pains were also noted in the tibiæ, increasing during rest and subsiding after exercising. The joints also ached and were stiff, suggesting the symptoms of lead-poisoning, etc.

Muenchener med. Wochenschrift, Munich.

70 (L, No. 35.) *Beiträge zur Leukocyten-Frage. E. Meyer
71 Zur Diagnose chronisch nephritischer Prozesse. Schwarzkopf.
72 *Absence of Tube-Casts in Urine of Nephritics. A. Treutlein.—Ueber das Fehlen von Zylindern im Urin von Nephritikern.
73 *Death of Newly-born from Forensic Standpoint. M. Hofmeier.—Ueber Todesursachen bei Neugeborenen während und gleich nach der Geburt mit Rücksicht auf ihre forensische Bedeutung.
74 Care of the Prematurely Born. O. Pilano (Würzburg).—Ueber die Pflege und Ernährung frühgeborener und schwächlicher Säuglinge in den ersten Lebenstagen
75 *Zur Therapie der Placenta previa. Hammer (Würzburg).
76 *Determination of Outlines of Heart on Left Side. H. Engel (Nauheim).—Ueber die Bestimmung der linken Herzgrenze.
77 *Intravesical Segregation of Urine. Keydel.—Die intravesikale Trennung des Urins beider Nieren.
78 Simple Walking Apparatus. H. Lossen (Darmstadt).—Ein einfacher Gehstützapparat.
79 *Study of Specific Gravity of Living Human Being. F. Jamin and E. Müller.—Ueber das spec. Gewicht des lebenden Menschen, mit bes. Berücksichtigung eines für klinische Zwecke brauchbaren "specifische Equivalent-Gewichts." (Concluded from No. 34.)

70. **Chemical Properties of Leucocytes.**—Meyer gives the details of several cases of acute and chronic leukemia, and then relates the results of chemical tests of the blood from these patients. Fresh, centrifugalized blood did not respond to the guaiacum test at all, but if distilled water was added to the blood before the tincture of guaiacum, the fluid turned blue at once. Not a trace of the guaiacum reaction could be obtained with the blood of the patient with acute lymphatic leukemia nor with extracts of human and animal thymus and lymph glands. Pus did not give the reaction until it had stood for some time or had been diluted with water. For these and other reasons which he mentions he asserts that there can be no doubt that the polynuclear and probably also the mononuclear neutrophile cells of the blood contain a substance which can be dissolved out by water, and which turns the guaiacum tincture blue in the absence of peroxids. The substance in question is entirely lacking in the lymphatic apparatus. He accepts it as an intracellular oxidating ferment. It does not give the reaction after boiling, but the response is positive again if hydrogen dioxid is added to the boiled fluid. It has also the property of oxidizing phenolphthalin in alkaline solution into phenolphthalein. Phenolphthalin is the product of the reduction of the latter, and is a colorless, soluble powder. If an aqueous solution is added to the solution of the above ferment or to the diluted blood of a myelogenic leukemic patient, the fluid turns a permanent purple. This reaction parallels the findings of the guaiacum test. Both of these tests may be positive with blood in high neutrophile leucocytosis. In several cases of pneumonia with 19,000 leucocytes, both of these reactions were positive, the phenolphthalin reaction most pronounced. But with diminishing numbers of leucocytes they subsided and were no longer to be distinguished when there were only 15,000 to 16,000. It is thus established that entirely normal neutrophile leucocytes contain the oxidating ferment, and it is thus not the prerogative of pus cells and of the cells in myelogenic leukemia alone. He adds that the simple phenolphthalin test not only gives an approximate estimate of an existing hyperleucocytosis, but it indicates besides the kind of leukemia present. He is now studying to determine whether it may not serve for quantitative determination of the leucocytes. The results of this research on the chemical properties of the leucocytes indicate that the terms acute lymphatic leukemia or lymphocytemia are correct. He describes in conclusion studies of the response to neutral red, and although they were meager, yet they suggest that it may be possible to detect in the blood the destruction of leucocytes evidenced by excessive elimination of urea in the urine.

72. **Absence of Tube Casts in Nephritis.**—Treutlein announces on the basis of a case observed and considerable experimental research, that the colon bacillus has the property of inducing destruction of the tube casts. Consequently, severe nephritis may occur without any casts being found in the urine. The colon bacillus may induce this "cylindrolysis" by its presence in the bladder or in the kidney itself. The ferments of the bacillus are unable alone to accomplish it.

73. **Sudden Death in the Newly-Born.**—Hofmeister describes 3 cases to show the liability to error in these cases. The births occurred under his eyes and only the most careful examination disclosed even a possible cause for the death of the child just before or after delivery. In one the microscope showed minute changes in heart and lungs, possibly rendering them unable to adapt themselves to extra-uterine life; in another some of the blood vessels in the placenta were obliterated; in the third, meconium was found in bronchi and lungs and yet the child was stillborn. The deaths might easily have been unjustly ascribed to the mothers under other circumstances.

75. **Treatment of Placenta Previa.**—Hammer reviews the experience of the Würzburg clinic with placenta previa, 107 cases in all. In 19, the records mention placenta centralis; in 70, previa lateralis, and in 18, low placenta previa. The mortality was 7.47 per cent. of the mothers and 54.2 per cent. of the children, but the maternal deaths were due to eclampsia, sepsis, lysol poisoning or air embolism in 4 cases and 3 succumbed to hemorrhage from atony of the uterus post-partum. The experience with the metreurynter introduced inside the fetal membranes has been very favorable.

76. **Outlining Left Heart.**—Engel recommends the use of a hard rubber plessimeter for percussion. He starts from a mark on the upper part of the heart outline, which can be easily determined by percussion to the left of the manubrium sterni. He then places the plessimeter rod on the mark with half its diameter projecting and by percussion determines the proper location of the rod which is likewise marked. By proceeding slowly in this way, advancing only half the width of the diameter of the rod at a time, it is possible to outline the heart with great accuracy. A stick of sealing wax will answer for the rod if necessary. His findings on more than 100 subjects were always confirmed by other tests and anatomic examination.

77. **Intravesical Segregation of Urine.**—Keydel reviews the various instances of application of the Luys or Cathelin intravesical urine separators as published by various other writers, and adds 4 from his own experience. He has collected 25 published since the authors' communications, and in

by far the largest majority the results were eminently satisfactory, while in the hands of the authors the results have always been brilliant and their list now numbers hundreds. Their success is probably due to their careful discrimination of the subjects, "asking the permission of the bladder," and remembering that the organ is not so sensitive to contact as to distention.

79. The Specific Gravity of the Living Human Being.—Jamin and Müller have been conducting laborious researches at Erlangen to determine the exact specific gravity of different individuals, the quotient of weight and volume. They constructed for the purpose a tall tub, a cylinder nearly full of water and containing a convenient seat. The subject, entirely naked, steps from a platform into the cylinder and seats himself. Then at a given moment he slips down into the water until it covers him entirely and the displacement of the water is registered outside. In order to make the procedure less annoying they finally modified it by having the seated subject merely lean back or forward until the head was submerged to a line from the chin to the roots of the hair. This was accepted as the approximate figure and used for calculations. As it does not pretend to be as exact as complete submersion they call it the "specific gravity equivalent," and have found it as useful for purposes of comparison as the correct figure would be. They have determined this equivalent for 118 persons. It is highest in youth and gradually declines from 1130 at 8 years to 1061 between 50 and 90 in male subjects, and from 1106 between 10 and 15 ~~to~~ 1065 between 50 and 90 in female subjects. The average for all ages and both sexes is 1088 in health, and 1074 in pathologic conditions. The equivalent in obesity was only 1049, 1037 and 1004 in 3 obese men; the normal equivalents for their age would have been 1061, 1066 and 1066. The value of the method lies in the information that it imparts in regard to the composition of the body, which has hitherto escaped our methods of weighing, etc., and will prove particularly valuable in case of obesity and dropsy. The investigations were repeated a number of times on the same subject in many instances, and the variations in the findings were found to be almost imperceptible for the same individual under similar conditions.

Therapie der Gegenwart, Berlin.

Last indexed page 140.

80 (XLIV, No. 6.) *Roentgen-Verfahren und interne Therapie. de la Camp.
81 *Hemorrhage from and Pain in Kidney. W. Klink.—Nierenblutung [illegible]
82 *Hot-Air [illegible] nd Renal Lithiasis. R. Sachs (Carlsl[illegible] von Gallen- und Nierenstein.
83 *Internal Affections and Sudden Death After Healing of Infantile Eczema. M. Cohn.—Zur Frage der inneren Erkrankungen und plötzlichen Todesfälle im Anschluss an die Heilung eines Säuglingsekzems.
84 *Verwendung des Scopolamin bei Magenleiden (in gastric affections). M. Pickardt.
85 Great Value of Kussmaul's Method of Checking Excessive Menstrual Hemorrhage. G. Klemperer. — Kussmaul's Methode zur Stillung übergrosser menst. Blutungen.

80. Aid of Roentgen Rays in Internal Medicine.—De la Camp remarks that internal medicine has not profited very materially by the Roentgen rays to date except in clinical diagnosis in combination with other methods of investigation.

81. Hemorrhage and Pains in the Kidneys.—Klink has found 18 operations on record undertaken on account of renal hemorrhage on a nervous basis. In 14 other cases the operation was merely on account of pains in the kidney, and in 23 for both hemorrhage and pain. The results have been that 69 per cent. were cured, 5 improved and in only 5 per cent. did the operation fail to relieve. Nine, or 16 per cent., have died. As a contribution to the subject of neuropathic renal hemorrhage he describes the unpublished case of a man of 25, previously healthy, who noticed blood in the urine for four weeks after a violent attack of pain in the left kidney, removing to the right kidney the next day, and recurring occasionally since then. When the bladder was opened by a high incision blood was seen to drip from one ureter. No further intervention was attempted and the symptoms all vanished. The chloroform narcosis may have been a factor in the cure, or it may have been due to suggestion or to reflex action on the kidney.

82. Hot-Air Treatment of Biliary and Renal Lithiasis.—Sachs illustrates an apparatus which he has devised for the application of a stream of superheated air to the kidney or liver region. The air is focused on the spot by a funnel arrangement. The results obtained have surpassed his most sanguine expectations.

83. Internal Affections and Sudden Death After Healing of Infantile Eczema.—Cohn discusses the subject and relates that a child of fifteen months exhibited signs of mild nephritis three days after the institution of treatment of chronic eczema of the scalp. Application of zinc oxid and oil, equal parts of each, cured the eczema, but was followed by symptoms of nephritis, edema of hands and feet, with albumin and casts in the urine.

84. Scopolamin in Gastric Affections.—Pickardt found that in 3 cases of excessive secretion of gastric juice, conditions were restored to normal by administration of .3 mgm. scopolamin bromid in water twice a day for four weeks. No by-effects were observed. The remedy proved especially beneficial in a case complicated by exophthalmic goiter.

Zeitschrift f. Krebsforschung, Jena.

86 (Vol. I, No. 1.) *Urogenital Cancer in Its Relation to the Cancer Problem. C. Posner.—Der Urogenitalkrebs und seine Bedeutung für das Krebsproblem.
87 *Ueber den Nachweis des Urobilins und seine Ausscheidung bei Carcinom. A. Braunstein.
88 *The Collective Cancer Inquiry in Spain. H. Leyden.

86. Journal for Cancer Research.—This periodical is published by the German committee for cancer research whose work has been frequently referred to in these columns. The name "cancer," *Krebs*, is deliberately chosen to express every kind of malignant tumor not connected with an infectious disease, thus excluding syphilids and actinomycotic tumors and the tumors of leukemia and pseudo-leukemia. The publication announces its scope as chiefly the clinical side of the cancer problem, with prophylaxis, treatment and casuistics, reviewing international literature, with abstracts, bibliographies and transactions of similar organizations elsewhere.

86. Urogenital Cancer.—Posner does not attempt to formulate any conclusions but merely reviews various aspects of the subject. He mentions that only 30 cases of supposed conjugal cancer, located on the genitalia, are on record, and these are not all above criticism. Contact infection and operative implantation are much more frequent. The theory of the origin of cancer from aberrant cells of germinal tissue is sustained by the frequency of cancer of the kidney in childhood. Rohrer found that in 37 out of 96 cases the patients were under 10 years of age. He emphasizes the fact, however, that scarcely any of them were carcinomata. The connection between metaplasia and carcinoma is becoming more probable. Halle, for instance, has noted preceding gonorrheal strictures in 12 out of 20 cases of carcinoma of the urethra, and others have reported cases of hard cancer developing on a basis of leucoplasia in the bladder. Still more evident is the connection between cancer and fistula of the urethra, tar, paraffin and chimney sweeping. Baum has demonstrated that chimney-sweeper's cancer was unknown in Hanover until wood was supplanted by coal for fuel. Posner knows of an unpublished case in which a worker in tar developed a typical cancer of the scrotum accompanied by one in the bladder. Since Rehn first called attention to the bladder tumors of men employed in anilin works, other cases have been reported until at present there are 6 authentic ones on record, 4 of carcinoma and 2 of sarcoma. Posner has seen a cancer in the bladder in a man employed in naphthol whose brother working beside him had stones in the bladder. Attempts to reproduce tumors of this kind in animals have always proved negative to date, and the spectrum did not reveal any changes in the blood. The animals died after inhaling the anilin, toluidin or nitrobenzol with symptoms of anemia and general prostration, in coma or in convulsions. Direct trauma seems to participate, if at all, in the etiology of carcinoma of the penis alone. Some authorities are inclined to regard injuries during birth as a factor in internal cancer. Posner is dubious in regard to the transformation of a benign into a malignant neoplasm, believing that the tumor was probably malignant from the start. Albarran found evidences of unmistakable cancer in 68 out of 88 cases assumed to be in this category. This applies also, Posner believes, to malignant recurrences after extirpation of a supposed benign growth, and also to growths in the vicinity of a cancer, and to the senile hypertrophy of the prostate, and to gynecologic affections. In conclusion, he refers to the fact that cancer of the bladder displays very little tendency to metastasis. Many cases run their entire course without a trace of enlargement of the glands or metastases.

87. **Urobilin with Carcinoma.**—Braunstein analyzes his findings in 22 cases of carcinoma. He found that it develops without essential urobilinuria if the neogrowth is not located in the liver and in the absence of fever or other complications. Urobilinuria appears when the liver is invaded by metastasis, when the carcinoma ulcerates and when a pneumonia or suppurative bronchitis develops secondarily. If the carcinoma is located in the liver there is pronounced urobilinuria and frequently bilirubinuria as long as the biliary passages are not compressed and the bile finds ready outlet. As soon as one of the biliary passages becomes obstructed the urobilin disappears completely from the urine, but the bilirubinuria persists.

88. **Cancer Inquiry in Spain.**—Leyden was physician to the German legation at Madrid at the time this collective inquiry was made, September 1, 1902. He states that the circulars were returned blank by 294 physicians, while 298 reported cancer patients. Of these, 116 were men and 182 women. Certain towns seemed to be entirely exempt from cancer. Not a single case was known to the eight physicians on the Canary islands, nor to the ten physicians in the Ceuta district in Africa.

Riforma Medica, Palermo.

89 (XIX, No. 28.) *Laringectomia totale per tumore maligno. A. de Cortes.
90 Sul significato clinico dell'eliminazione del acido glicosurico per le urine. *R. Reale.*
91 *Sulla funzione difensiva del grande epiploon. R. Pirone.
92 *Experimental Research on Organ Treatment. G. Ghedini.—Ricerche intorna ad alcuni estratti organici.
93 (No. 29.) *Caso di tubercolosi con leucemia. T. Prodi.
94 Sui nervi della glandola lacrimale. S. P. Allegra.
95 (Nos. 30 and 31.) *Sulla patogenesi delle ematemesi post-operatorie. C. Tonarelli. *(Commenced in No. 29.)*
96 *Ten Years of Abdominal Surgery by Prof. I. Tansini. G. Palleroni.—Contributo di chirurgia addominale praticata dal Prof. I. Tansini. (Commenced in No. 29.)
97 *Chemistry of Stomach. D. Pirrone.—L'acido cloridrico libero, la pepsina, il caglio nelle malattie dello stomaco e dopo la somministrazione di alcuni farmaci.
98 *Histologic Alterations Induced by Organ Juices and Cytotoxic Serums. C. Cafieri.—Sulle histolog. alterazione, etc.
99 *Studii sull vaccino. O. Casagrandi.
100 *Contributo sperimentale alla chirurgia della cistifellea (of gall bladder). *L. Baldassari and A. Gardini.*
101 (No. 32.) Contributo allo studio della fisiologia del rene (of the kidney). A. Ferrata.
102 (No. 33.) La radioscopia del fascio cardio-vasculare. G. Arcarisi (Palermo).
103 Serums Specifically Toxic for the Suprarenal Capsule. M. L. Della Vida.—Sieri tossici specifici per le calsule surrenali.
104 Sulla tubercolosi primitiva della mamella. R. Caminiti. (Commenced in No. 32.)
105 Contributo alla chirurgia delle vie biliari. G. Mariotti. (Commenced in No. 32.)
106 (No. 34.) *Sull' epididimite tubercolare primaria. M. Delli Santi.
107 Sul valore diagnostico della tubercolina. E. Malfatti.
108 A proposito del neurococco di Bra nel sangue degli epilettici. V. Tirelli.
109 Guarigione di un caso di meningite tubercolare (recovery). G. Avanzino.
110 (No. 35.) Del souffle cardio-pulmonare diastolico. M. DeVivo.

89. **Laryngectomy.**—Cortes removed the larynx in a man of 67 on account of a carcinoma on one vocal cord without glandular involvement, and reports that when seen nearly three years later the man was in perfect health. He was able to make himself understood by those around him by speaking in what Cortes calls the "aphonic pseudo-voice" frequently observed after this operation.

91. **Defensive Action of Omentum.**—Pirrone has been studying further the defensive action of the omentum which De Renzi and Boeri have recently proclaimed as quoted on page 887. He examined the omentum after it had encapsulated the spleen, to determine if the process was similar to that of ordinary encapsulation or whether the omentum undergoes special histologic changes. He experimented on rabbits and cats and found that in fact the spleen, after necrosis from ligature of its vessels, soon became enveloped by the great omentum. The inflammatory process in the membrane entails a rapid formation of connective tissue which not only forms a capsule around the spleen but the cells have a phagocytic action, devouring the detritus of the spleen. By means of this dual action, plastic and phagocytic, the great omentum finally ends by destroying the spleen, behaving toward it like the endothelium of the vessels in respect to a thrombus. After extirpation of the spleen there is nothing to indicate that the great omentum undergoes lymphoid transformation to compensate the missing organ. The phenomena observed establish that the great omentum has a decided protecting action in the peritoneum, and under certain circumstances plays an important part in the defense of the abdominal cavity and hence of the entire body.

92. **Studies of Action of Organ Extracts.**—Ghedini injected dogs and lambs subcutaneously with extracts of various organs, continuing the treatment for one to several months. He then found evidences of inflammation of a degenerative and infiltrative type in the superficial lymphatics, especially those in the axilla and inguinal regions, and in the liver, kidneys, and spleen, while the thyroid gland was in a condition of hyperfunction. No other reaction could be discovered. These results were constant in his 14 animals, and he assumes that the organ extracts acted like toxins in the circulation without any specific affinity for the corresponding organs. He is now engaged on a second series of animals; the results to date apparently confirm those reported.

93. **Tuberculosis and Leukemia.**—Prodi reports a case of the coincidence of these affections and assumes a causal connection between them. He also refers to the mildness of the tuberculosis when associated with leukemia or pseudoleukemia. The tuberculous lesions are generally discovered only at the autopsy.

95. **Pathogenesis of Post-Operative Hematemesis.**—Tonarelli describes 2 cases of fatal hematemesis occurring one and five days after operations on account of biliary lithiasis in the first and a hydatid cyst in the liver in the other case. In both there had been retention of bile, and he thinks it possible that this may have been a factor in the production of the hemorrhagic tendency. The hemorrhage was parenchymatous, involving the entire capillary system of the stomach in the case that came to the dissecting table, and the symptoms had been identical in the other. Hayem reported a case in which absorption of bile from the peritoneum had induced a hemorrhagic diathesis. The chloroform may also have aided in disturbing the balance of the already unstable conditions in the circulatory system. The trauma of the operation with its manipulation of the nerves in the peritoneum and omentum may likewise entail a kind of shock to the vasomotor nerves, and hence induce transient disturbances in the circulation through the viscera, sufficiently intense while they last to explain the phenomena observed.

96. **Tansini's Technic and Results in Abdominal Surgery.**—Palleroni reviews his notes taken during ten years' work as assistant to Tansini. He mentions that the majority of the 131 laparotomies were undertaken on account of tumors. The mortality was 9 per cent. and 119 patients were restored to health. The fatalities were almost exclusively among patients with myomata. In the other groups the mortality was null, or not over 1 per cent. One of the ovarian cysts removed weighed 40 kilograms (88 pounds). The patient was in a very serious condition, but is now in good health. Two days before the operation the patients are prepared by an oil or saline purge, and after the mechanical cleansing of the entire abdomen, shaving and applying turpentine and sulphuric ether, it is washed with 1 per 1,000 sublimate and a cloth wet with the same is applied for half an hour to cover the entire abdomen. Fifteen minutes before the chloroform, 1 cgm. of morphin hydrochlorate is injected. The entire body is warmly covered except for the field of operation, and the temperature of the room is 77 F. The nostrils are kept closed during the chloroform administration to avoid reflex action during the first stage of the narcosis, using a special nose clamp devised by

Tansini. After the abdominal walls are incised the deep is followed by superficial anesthesia, just keeping the patient slightly drowsy. Tansini makes constant use of the galvano-cautery knife, believing that it answers several purposes at once. He prefers a narrow opening into the abdomen, and operates as far as possible extraperitoneally. He never uses an antiseptic in the toilette of the abdomen, fearing that it might irritate, and wipes it dry with gauze sponges wrung out of tepid sterile water. He very rarely drains. The particulars of the various groups and most interesting cases are added.

97. **Chemistry of Stomach Under Certain Drugs.**—Pirrone's experience has been that in gastric affections the behavior of the hydrochloric acid and of the ferments is not identical; only the pepsin and the rennet behave alike. In Reichmann's disease, along with the increase of acid the ferments will be found much increased, but when the amount of acid diminishes under the influence of atropin, the quantity of the ferments is not modified. The ferments may occur in normal proportions in chronic gastritis with disappearance of the free acid, and also in hypochlorhydria of nervous origin. In cases of carcinoma, the acid secretion is impaired before that of the ferments, which may persist in normal amounts for a long time. Strychnin stimulates the secretion of the acid in chronic gastritis, with not very advanced lesions, and in hypochlorhydria of nervous origin, but it does not affect the ferments. The action of both atropin and strychnin is almost null when administered other than by the mouth, but that of pilocarpin is almost equal by the subcutaneous route. The latter increases the secretion of acid but does not affect that of the ferments. Bitter tinctures, alkalines and alcohol in small doses do not exert any influence on the chemistry of the stomach. Daily lavage of the stomach does not affect the secretion of hydrochloric acid, pepsin or rennet, but reduces the percentage of total acidity in the stomach content.

98. **Cytotoxic Serums.**—Cafieri's results were practically the same as those obtained by Ghedini mentioned above.

99. **Studies of Vaccine.**—Casagrandi announces that sterile, filtered vaccine, which was unable to cause the formation of a pustule when inoculated in the skin of dogs or to induce any reaction on the cornea of rabbits, yet conferred immunity on them, so that subsequent injection of active virus did not cause infection as in the controls. Similar tests on man resulted differently. The filtrates and dilutions which confer immunity on the dog do not render human subjects immune. On the other hand, he found that if the dogs were inoculated with the active virus before the cutaneous lesion from the first vaccination had entirely healed, infection resulted, as also when the dogs were inoculated simultaneously with the vaccine and a staphylococcus derived from vaccine pustules on other dogs. He thinks that these facts indicate the participation in the vaccine pustule of some pyogenic germ which finds in it special conditions for its development.

100. **Plastic Operation on Gall Bladder.**—Baldassari was so successful in his tests of resection and subsequent plastic operations on the gall bladder of dogs that he thinks the method is also applicable to man. He used a flap for the purpose cut from the peritoneum and re-enforced by a thin layer of muscle from the vicinity. The muscular side is turned inward and the flap is sutured so that it extends for several millimeters beyond the defect on all sides. The peritoneal outer side of the flap was sutured with fine silk to the gall bladder. The results were perfect, but he found that the flap served only the purpose of a temporary stop-gap, under which the gall-bladder regeneration proceeded undisturbed until the integrity of the organ was restored. He describes his negative experiences with other kinds of flaps. He cuts the muscle flap along the edge of the abdominal incision and keeps it wrapped in gauze wet with saline solution while the gall bladder is being resected. In some experiments he removed nearly all the wall of the gall bladder on one side, the subsequent plastic operation being as successful as with smaller resections.

106. **Experimental Tuberculosis of the Epididymis.**—Delli Santi was able to induce tuberculous epididymitis in dogs by introducing tubercle bacilli into the urethra. The bacilli found their way into the epididymis and testicles but caused no harm (during the forty-five days' limit of the tests), unless special conditions were produced which favored their proliferation. One of these conditions was venous stasis, passive congestion from ligature of the vessels in the spermatic cord. Under these circumstances a tubercular lesion soon developed and the infection spread to the entire organ. This research establishes the possibility of contagion from tuberculous lesions in the female genitalia, and explains the fact that the left testicle is most frequently affected, as the anatomic conditions favor the predisposing conditions of defective circulation such as were produced artificially in the experiments.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

A DICTIONARY OF MEDICAL SCIENCE. Containing a Full Explanation of the Various Subjects and Terms of Anatomy, Physiology, Medical Chemi[illegible] [illegible]ics, Medicine, Hygiene, [illegible], Ophthalmology, Otolog[illegible] [illegible] Obstetrics, Pediatrics, Me[illegible] [illegible] Science, etc. By Roble[illegible] [illegible]sor of Institutes of Medi[illegible] [illegible]he Jefferson Medical College [illegible] Thoroughly Revised, with the Pronunciation, Accentuation and Derivation of the Terms. By Thomas L. Stedman, A.M., M.D., Fellow of the New York Academy of Medicine. Cloth. Pp. 1212. Price, $8.00. Philadelphia and New York: Lea Brothers & Co. 1903.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued Monthly. Under the General Editorial Charge of Gustavus P. Head, M.D [illegible] [illegible]ngology ar[illegible] Post-Graduate [illegible] [illegible]lume IX. Bacteriology. [illegible] Edited [illegible] M.D.; Adolph [illegible] and William Healy, A.B., M.D. August, 1903. [illegible] Price, $1.25. Chicago: The Year Book Publishers.

A SURGICAL HANDBOOK. For the Use of Students, Practitioners, House Surgeons and Dressers. By Francis M. Caird, M.B., F.R.C.S. Edin., Assistant Surgeon, Royal Infirmary, Edinburgh, and Charles W. Cathcart, M.B., F.R.C.S. Eng. and Edin., Surgeon, Royal Infirmary, Edinburgh. With Very Numerous Illustrations. Twelfth Edition. Morocco. Pp. 323. Price, $2.75. London: Charles Griffin & Co., Ltd. Chicago: W. T. Keener & Co. 1903.

MODERN MICROSCOPY. A Handbook for Beginners and Students. Combining: 1. The Microscope and Instructions for Its Use, by M. I. Cross. 2. Microscopic Objects, How Prepared and Mounted, by Martin J. Cole, Lecturer in Histology at Cooke's School of Anatomy. Third Edition. Entirely Revised and Enlarged, to which is Added 111 Microtomes, Their Choice and Use. Cloth. Pp. 292. Price, $1.50. Chicago: W. T. Keener & Co. 1903.

THE PRINCIPLES AND PRACTICE OF HYDROTHERAPY. A Guide to the Application of Water in Disease. For Students and Practitioners of Medicine. By Simon Baruch, M.D., Professor of [illegible] in the New York Post-Graduate Medical School and Hospital. Second Edition, Revised and Enlarged. With [illegible] Illustrations. Cloth. Pp. 496. Price, $4.00 net. New York: Wm. Wood & Co. 1903.

TAKOSIS, A CONTAGIOUS DISEASE OF GOATS. A Preliminary Report on Its Nature, Cause and Prevention. [illegible] Agriculture. By John R. Mohler, V.M.D., [illegible] ological Division, Bureau of Animal Industry [illegible] burn, D.V.S., Acting Assistant Chief of [illegible] Bureau of Animal Industry. Paper. Pp. 44. [illegible] ment Printing Office. 1903.

A MANUAL OF OPERATIVE SURGERY. By Sir Frederick Treves, Bart., K.C.V.O., C.B., LL.D., F.R.C.S., Sergeant Surgeon-in-Ordinary to H[illegible] New Edition. Revised by the Author and [illegible] Jr., F.R.C.S., Surgeon to the London Hosp[illegible] [illegible] About 450 Illustrations. In Two Volumes. Volume I. Half Morocco. Pp. 750. Philadelphia and New York: Lea Brothers & Co.

A TEXT-BOOK OF CLINICAL ANATOMY. For Students and Practitioners. By Daniel N. Eisendrath, A.B., M.D., Clinical Professor of Anatomy in the Medical Department of the University of Illinois (College of Physicians and Surgeons). Beautifully Illustrated with 153 Illustrations, a Number in Colors. Cloth. Pp. 515. Price, $5.00 net.—Philadelphia, New York, London: W. B. Saunders & Co. 1903.

INTRACRANIAL TUMORS AMONG THE INSANE. A Study of 29 Intracranial Tumors Found in 1,642 Autopsies in Cases of Mental Disease. By I. W. [illegible] [illegible]ogist to the Government Hospital for the [illegible] C. Illustrated by 30 Plates and 65 Mi[illegible] Cloth. Pp. 95. Washington: Governmen[illegible]

DISEASES OF THE SKIN. An Outline of the Principles and Practice of Dermatology. By Malcolm Morris, Consulting Surgeon to the Skin Department, St. Mary's Hospital, London. With 2 Colored Plates and 58 Plain Figures. New Edition. Flexible Cloth. Pp. 642. Price, $2.50. Chicago: W. T. Keener & Co. 1903.

A TEXT-BOOK OF DISEASES OF WOMEN. By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania.

Sumptuously Illustrated with Some 650 Mostly Original Illustrations, Many in Colors. Cloth. Pp. 675. Price, $5.00 net. Philadelphia, *New York, London*: W. B. Saunders & Co. 1903.

The Principles and Practice of Surgery. Designed for Students and Practitioners. By George Tully Vaughan, M.D. (Univ. of Va.), Assistant Surgeon-General U. S. Public Health and Marine-Hospital Service. Cloth. Pp. 568. Price, $3.50. Philadelphia and London: J. B. Lippincott Company. 1903.

Transactions of the American Pediatric Society. Fourteenth Session, Held at Boston, May 26, 27 and 28, 1902. With Addenda from the Thirteenth Session and an Index. Vols. I.-XIV., Inclusive. Edited by Walter Lester Carr, M.D. Cloth. Pp. 310. Reprinted from the Archives of Pediatrics. 1902.

Elementary Bacteriology. By M. L. Dhingra, M.D., C.M. Edin., Diplomate in State Medicine, University of Cambridge. With Colored Frontispiece and Illustrations in the Text. Cloth. Pp. 145. Price, $1.12 net. London, New York and Bombay: Longmans, Green & Co. 1903.

Physical Diagnosis of Diseases of the Chest. By Richard C. Cabot, M.D., Physican to the Out-patients, Massachusetts General Hospital. Second Revised Edition. With 147 Illustrations. Cloth. Pp. 319. Price, $2.50 net. New York: Wm. Wood & Co. 1903.

A Laboratory Guide in Urinalysis and Toxicology. By R. A. Witthaus, A.M., M.D., Professor Chemistry, Physics and Toxicology in the Medical Department, Cornell University. Fifth Edition. Cloth. Pp. 115. Price, $1.00 net. New York: Wm. Wood & Co. 1903.

Diseases of the Nose and Throat. By Charles Huntoon Knight, A.M., M.D., *Professor of Laryngology, Cornell University Medical College.* 147 Illustrations. Cloth. Pp. 423. Price, $3.00 net. Philadelphia: P. Blakiston's Son & Co. 1903.

A Narrative of Medicine in America. By James Gregory Mumford, M.D., Assistant Visiting Surgeon to the Massachusetts General Hospital. Cloth. Pp. 508. Price, $3.00. Philadelphia and London: J. B. Lippincott Co. 1903.

Transactions of the Twenty-fifth Annual Meeting of the American Laryngological Association. Held at Washington, D. C., May 12, 13 and 14, 1903. Cloth. Pp. 292. New York: Published by the Association. 1903.

Nurses' Guide to Surgical Bandaging and Dressings. By William Johnson Smith, F.R.C.S., Principal Medical Officer, Seamen's Hospital, Greenwich. Cloth. Pp. 167. Price, $0.75. Philadelphia: J. B. Lippincott Co.

Hypnotism. Its History, Practice and Theory. By J. Milne Bramwell, M.B., C.M. Cloth. Pp. 477. Price, $4.50 net. Philadelphia: J. B. Lippincott Co. 1903.

Transactions of the Medical Society of the State of New York for the Year 1903. Cloth. Pp. 514. Published by the Society. 1903.

New Patents.

Patents of interest to physicians, September 1 and 8:

737591. Sanitary face shield. Ellen Dempsey, Albany, N. Y.

738009. Medicine applicator. Julius N. Dews, *Portsmouth, Va.*

738104. Device for lifting sick people in beds and removing them from same. *August Gaiser, Oberndorf, Germany.*

737625, 737626. Making sulphuric acid and apparatus for manufacturing sulphuric acid. John B. F. Herreshoff, New York.

737838. Shielded clinical thermometer and making same. Solomon C. Hirschberg, New York.

737656. Vaccine and *preparing* same. La Fayette R. Parsons, Detroit.

737959. Ankle-supporting shoe. Abraham Posner, New York.

738078. Electric belt for medicinal purposes. Ebenezer Smellie, Glasgow, Scotland.

737795. Syringe pipe. Victor C. Van't Woud, New York.

738593. Auriphone. Lewis M. Atkinson, Rockport, Ind.

738274. Making perfumes and disinfectants. Jean Bardin, Brussels, Belgium.

738283. Spine-stretching device. Carl G. P. Blomqvist, Omaha.

738403. Electrovibratory apparatus for therapeutic purposes. Fred H. Brown, Los Angeles.

738603. Syringe nozzle. Haydn Brown, London, England.

738529. Body brace. William B. Dewees, Salina, Kas.

738680. Sanitary cuspidor. Michael E. Headland, Butler, Pa.

738544. Hot water bottle. Frederick H. Jones, Wakefield, Mass.

738461. Preparing oils for medicinal use. Philipp Lewy, Charlottenburg, Germany.

738339. Bust developer. Sidney P. Madeira and J. J. Purcell, Pueblo, Colo.

738352. Binaural stethoscope. William J. Penfold, Newcastle-on-Tyne, England.

738357. Massage apparatus. John A. Reade, Jr., and C. F. Birtman, Chicago.

738583. Pneumatic massage apparatus. Robert Watson, Scranton, Pa.

738508. Irrigating device. Cora I. Wilson, Philadelphia.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. Army, under orders from the Adjutant-General's Office, Washington, D. C., for the week ending Saturday, Sept. 19, 1903:

Ames, Roger Post, contract surgeon, is granted two months' leave of absence.

Geer, C. C., first lieut. and asst.-surgeon, is granted leave of absence for one month, to take effect on the expiration of his present sick leave.

Noble, Robert E., first lieut. and asst.-surgeon, having reported his arrival at New York City, is relieved from further duty in the Division of the Philippines, and will proceed to Fort Sheridan for duty.

Straub, Paul F., captain and asst.-surgeon, will proceed, at the proper time, to West Point, Ky., and report, not later than September 25, to Major-General J. C. Bates for temporary duty during the Army maneuvers to be held at that place, and, on the completion thereof, will return to his proper station.

Wales, Philip G., major and surgeon, is granted an extension of one month's sick leave on surgeon's certificate.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending Sept. 26, 1903:

P. A. Surgeon H. C. Curl, detached from the *New York* and ordered to the *Boston.*

P. A. Surgeon J. S. Taylor, detached from the Bureau of Medicine and Surgery, Navy Department, and ordered to the Naval Hospital, New York City.

Surgeon E. R. Stitt, detached from duty as a member and recorder of the naval and medical examining boards, Washington, D. C., and ordered to resume usual duties.

Surgeon C. F. Stokes, detached from the Bureau of Medicine and Surgery, Navy Department, and ordered to the Naval Museum of Hygiene and Medical School, Washington, D. C.

Asst.-Surgeon A. Stuart, ordered to the Naval Hospital, Naval Home, Philadelphia.

A. A. Surgeon J. L. Taylor, appointed acting assistant surgeon from Sept. 16, 1903.

A. A. Surgeon F. W. Tyree, detached from the Naval Hospital, Port Royal, S. C., and ordered home to wait orders.

Surgeon J. M. Steele, ordered to the Naval Hospital, Port Royal, S. C.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Sept. 25, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, Sept. 12-19, 2 cases.

California: Los Angeles, Sept. 5-12, 6 cases; San Francisco, Sept. 6-13, 2 cases.

Colorado: Denver, Aug. 22-29, 1 case.

Illinois: Belleville, Sept. 12-19, 3 cases; Chicago, Sept. 12 19, 7 cases.

Maine: Brewer, Sept. 17, present.

Massachusetts: Fall River, Sept. 12-19, 3 cases.

Michigan: Port Huron, Sept. 12-19, 2 cases.

Mississippi: Natchez, Sept. 5-12, 2 cases.

Missouri: St. Louis, Sept. 12-19, 1 case.

New York: New York City, Sept. 12-19, 1 case.

Ohio: Lorain, Sept. 12-19, 1 case.

Pennsylvania: Carbondale, Sept. 14-21, 1 case.

South Carolina: Charleston, Sept. 12-19, 1 case.

Washington: twenty counties, Aug. 1-31, 34 cases, 2 deaths

Wisconsin: Milwaukee, Sept. 12-19, 2 cases.

SMALLPOX—FOREIGN.

Belgium: Liege, Aug. 29-Sept. 5, 1 case, 1 death.

Brazil: Pernambuco, July 17-31, 5 deaths; Rio de Janeiro, Aug. 8-23, *128 cases, 62 deaths.*

China: Shanghai, Aug. 1-8, 2 deaths.

France: Marseilles, Aug. 1-31, 11 deaths; Paris, Aug. 22-29, 2 deaths.

Great Britain: Birmingham, Aug. 29-Sept. 12, 5 cases; Dublin, Aug. 29-Sept. 12, 1 case; Leeds, Sept. 5-12, 11 cases; Liverpool, Aug. 29-Sept. 12, 10 cases, 3 deaths; Manchester, Aug. 29-Sept. 5, 2 cases; Newcastle-on-Tyne, Aug. 22 Sept. 5, 12 cases, 1 death; South Shields, Aug. 2-Sept. 5, 5 cases, 1 death.

India: Bombay, Aug. 11-25, 7 deaths.

Mexico: City of Mexico, Aug. 30-Sept. 13, 5 cases, 5 deaths.

Netherlands: Amsterdam, Aug. 29-Sept. 12, 4 cases.

YELLOW FEVER—UNITED STATES.

Texas: Laredo, Sept. 24-25, 2 cases, 2 deaths.

YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, Aug. 8-23, 8 cases, 1 death.

Colombia: Panama, Sept. 7-14, 4 cases, 1 death.

Mexico: Citas, Aug. 30-Sept. 5, 24 cases, 3 deaths; Merida, Aug. 30-Sept. 5, 11 cases; Motul, Aug. 30-Sept. 5, 1 case; Monterey, Sept. 23, present; Nuevo Laredo, Sept. 17, 1 case; Progreso, Aug. 30-Sept. 5, 1 case, 1 death; Tampico, Aug. 30-Sept. 5, 7 cases, 3 deaths; Tehuantepec, Aug. 30-Sept. 5, 2 deaths; Salina Cruz, Aug. 30 Sept. 5, 4 cases, 2 deaths; Vera Cruz, Sept. 5-12, 44 cases, 14 deaths.

CHOLERA—FOREIGN.

China: Amoy, July 15, present; Shanghai, Aug. 1-8, 1 death.

Straits Settlements: Singapore, July 25-Aug. 1, 5 deaths.

Turkey: Syria, Aug. 17, 472 cases, 428 deaths.

PLAGUE—INSULAR.

Hawaii: Hilo, Sept. 15, 1 death; Honolulu, Sept. 11-12, 2 cases.

PLAGUE—FOREIGN.

Brazil: Rio de Janeiro, Aug. 8-23, 31 cases, 22 deaths.

Chile: *Conception,* July 11, *present*; Iquique, July 14-Aug. 8, 53 cases, 34 deaths; Pisaqua, July 11, present; Valparaiso, July 11, present.

China: Fuchau, Aug. 12, present; Hongkong, Aug. 1-22, 13 cases, 12 deaths.

Egypt: Alexandria, Aug. 15-21, 8 cases, 4 deaths; Damiette, Aug. 15-21, 3 cases, 1 death.

India: Bombay, Aug. 11-25, 165 deaths.

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Original Articles.

GASTRIC ULCER;

CLINICAL, PATHOLOGICAL AND SURGICAL PHASES.[*]

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The invasion of the domain of internal medicine by the modern surgeon has been one meeting no little opposition, as the battle of words in medical societies and articles in journals will attest, yet this onward march of the application of proper surgical principles continues. With true surgical principles applied to internal organs, with actual demonstrations of the results claimed by such procedures by the surgeon, the practitioner is willing to accept these procedures and to recommend them. Only a few years ago pelvic hematocele found a place in every text-book and was treated from a medical standpoint. some cases recovering, but many dying; to-day ectopic gestation with ruptured tube has replaced the hematocele pathology, and proper surgery saves the majority of these cases. Postmortems on cases dead from internal bleeding from ruptured tubes, and surgical operations on the living revealed the true pathology in these cases. The proper management of these cases is understood by every physician and surgeon of to-day.

Nature is a great healer when the conditions are favorable for repair. The whole secret of Nature's reparation of tissues destroyed or injured is embodied in one of nutrition, both bodily and locally, and a physiologic rest of the diseased part. Unfortunately for Nature, there are some parts of the body in which these desired ends can not, in a great measure, be attained. While the stomach is not necessary to life, the being is much better off with than without it. Absolute physiologic rest of this organ is almost if not impossible; thus both the strongholds of persistent pathology are well guarded by impaired bodily nutrition and physiologic activity of the crippled stomach. If an eye is inflamed it is put to rest in a darkened room; if a synovitis exist the joint is immobilized; if there exist an ulcer on the lower extremity, the leg is bandaged and elevated when necessary to give support (physiologic rest) to the crippled returning blood current. If a similar process exist in an internal organ why not apply the same surgical principles for its relief?

Since Billroth's successful pylorectomy in 1881, stomach surgery has advanced rapidly both in perfecting the technic and scope of application. The operations for removal of malignant growths have not been attended by a permanency in their curative results that lends much encouragement, yet the temporary relief obtained has justified this effort at palliation of symptoms and prolongation of life.

In 1881 Wolfler performed the first gastroenterostomy. This operation was devised to relieve cases of malignant and non-malignant stenosis of the pylorus with stomach dilatation, and the results have been all that could be desired in the relief of disagreeable symptoms even where a cure was not possible. The application of this operation to the cure of uncured medicinally-treated cases of gastric ulcer, has more recently been introduced with results that are most satisfactory.

The term ulcer of stomach as applied to this article does not include malignant neoplasms, or the multiple follicular ulceration in tuberculosis of the stomach. The term ulcer does not necessarily imply that there is but one ulcerated spot, as there may be many and yet come within the scope of this article. Of 867 cases reported by one author there were more than one ulcer in 175 of the cases. The acute cases are more likely to be multiple, but of this variety surgery is needed less, save for hemorrhage.

A chronic ulcer of the stomach may be very large or may remain for years a small round ulcer the size of a quarter. The investigations that have been made to determine the location of these ulcers have been so imperfect and haphazard that they are almost valueless. Yet a number of carefully recorded postmortems have shown that certain parts of the stomach are more liable to this disease. On the posterior wall of the lesser curvature near the pylorus is a favorite site for the development of an ulcer. The usual shape of these ulcers is round or oval, yet the large ulcers may assume almost any shape or several may be joined together by an isthmus of healthy mucous membrane. The healing of an annular ulcer may by the cicatrix produce sacculation of the stomach into two or more divisions. Hemorrhage as a symptom is quite prominent at some stages of an ulcer's progress, yet it may be so trivial as not to be of much consequence or value as a diagnostic or operative indicator. On the other hand, hemorrhage from a gastric ulcer is a frequent cause of death. In a large series of fatal cases the postmortems revealed 20 per cent. of death from hemorrhage. This table was based on deaths from chronic cases, as the death rate from hemorrhage in acute cases is very much lower, 5 per cent.

In cirrhosis of the liver ulcers are of rather frequent occurrence, and are prone to bleed, owing to the impeded circulation through the liver. I remember seeing such a case a few years ago. The hemorrhage in this case was terrific. The patient made a recovery and is well to-day, as far as his gastric ulcer is concerned.

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[*] Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Obstetrics and Diseases of Women, and approved for publication by the Executive Committee: Drs. A. Palmer Dudley, H. P. Newman and J. H. Carstens.

As an ulcer (chronic) approaches the peritoneum it forms adhesions to surrounding organs. The pancreas is most frequently involved owing to the ulcer being on the posterior wall. This mass of adhesions at the time of operation is liable to lead the surgeon into an error in diagnosing the condition as cancer, especially when the omentum is involved. Such was my experience in one case. This effort on the part of Nature to prevent first, perforations into the general peritoneal cavity, and second, to limit local suppuration in case such takes place. The conservative efforts of Nature are often detrimental by obstructive symptoms, and may prevent ulcers healing. The efforts on the part of Nature to limit the pathology occasionally result in a fatal hemorrhage from adjacent vascular organs. Peritonitis may extend over a large area of stomach without perforation, thus limiting movements of the organ and causing contraction of its walls. Delays permit large ulcers to form. Large cicatrices interfere with the functions of the organ, are prone to break down into ulcers again, or to become malignant. A portion of a stomach becoming fixed by adhesions to the liver limits the peristaltic movement and permits the food to remain in the lower segment of the organ; fermentation results, and dilation is inevitable. It is not necessary that the pylorus be constricted in every case of gastrectasis. All are agreed as to the management of these cases.

On first thought one would naturally think that nearly all those cases of extensive chronic ulcers would in their progress divide vessels that would quickly bleed the patient to death, but when we recall the inflammatory changes that have taken place in the surrounding structures and the power of the muscular contractions on the vessels when this change is not complete, it is then easily understood how Nature so frequently checks the bleeding in this locality. There is no way of telling in advance as to how well Nature has fortified against such an attack. The deeper the ulcer the larger the blood vessel injured and the more profuse the bleeding, as a rule. Nature anticipates the dangers of a threatened perforation in many cases by agglutinating some structure or organ to the visceral peritoneum overlying the seat of threatened invasion. If this effort is not successful the contents of the stomach are spilled into the general peritoneal cavity, resulting in death quickly. If success attends this effort a localized abscess may result, or fatal hemorrhage may be induced at time of perforation; especially is this true if the pancreas, liver or spleen should be the organ adhered. The most frequent site of the perforation has been variously located by different observers, the consensus of opinion placing the majority of perforations in the anterior wall of the stomach, which is contrary to the location of the majority of ulcers. When we recall that many cases may perforate in the posterior wall and not be diagnosed owing to the frequency of the limiting inflammatory process protecting the general peritoneum, we can then see how uncertain this theory is. The anterior perforations are the fatal ones, hence postmortem verifications are more frequent. This disease is four or five times as prevalent in women as in men, but the mortality of the latter is much greater than the former. While the general belief has been that this is a disease especially liable to attack young girls, the statistics of some authors rather disprove this theory, showing gastric ulcer occurring most frequently at the age of twenty-five. Simple ulcer is rare before puberty.

As a rule, the ingestion of food produces pain in the cases where there is a freedom from suffering when the stomach is empty, and in those cases where there is persistent discomfort the pain is increased by taking food into the organ. Solid or coarse food is more liable to produce pain. Milk and all mucilaginous drinks, as a rule, rather relieve the pain, in this respect differing from the usual effects of milk in the non-organic conditions. A patient may complain of a pain in the epigastrium over a large area, yet the tenderness may be confined to a small spot.

During menstruation, when the abdominal organs are physiologically congested, the pain in gastric ulcer is increased, and the tenderness is more marked. It has been noticed that the vomiting of blood is most likely to take place and to be more profuse at this period. Vomiting as a symptom is not of as frequent occurrence as is generally supposed, yet in many cases it is the one symptom above all others to be met by treatment. A feature to be remembered about the vomiting is that it is not usually accompanied by nausea, and the vomiting does not require much effort. This vomiting usually takes place in about fifteen minutes to two hours after taking food. The vomitus usually contains an excess of hydrochloric acid. Where there are adhesions to surrounding organs in the region of the pylorus, vomiting may occur at any time of the day or night, regardless of the ingestion of food.

Where there is a catarrhal condition of the whole mucous membrane in these cases the vomiting is more persistent, comes on earlier and is accompanied by more nausea. While the vomiting is Nature's remedy to rid the stomach of the pain-producing foreign substances it at the same time is a dangerous complication, leading to starvation, hemorrhage and rupture of the ulcer. The bleeding in these cases varies from a few undetected drops to a fatal ending. Hematemesis occurs in probably 75 per cent. of all cases, yet an ulcer may be slowly forming for years without giving rise to a perceptible hemorrhage. A hearty meal, a meal of solid food or a gaseous distention may be the exciting cause of an alarming hemorrhage.

In the long-standing cases of pyloric ulcer the vomiting and pain are more persistent, and usually last until a fatal termination is reached. When the ulcer or cicatrix is near the pylorus, the stomach is more liable to be dilated, and parts of its contents remain to become decomposed into a sour, stinking, poisonous fluid. The repeated hemorrhages leave the sufferer with impaired digestion, less recuperative powers, and profoundly anemic—all complications against a successful recovery of the patient.

The dignity of a gastric ulcer is much depreciated by thinking or speaking of it as an abrasion of the mucous membrane of the stomach giving rise to a small painful spot felt in front and behind, with occasional vomiting of blood, these trivials to be relieved by subnitrate of bismuth, nitrate of silver, etc. About 10 per cent. of all gastric cancers have their origin in a benign ulcer (Lebert). If we accept this statement as true we then have a strong argument in favor of resorting to any procedure for the early cure of all benign ulcers of the stomach. Prophylaxis is the keynote of the successful treatment of this incurable disease, when once inaugurated.

Case 1.—Mrs. P., age 43. Mother of three children. Housewife. American. Three years ago this woman began having dyspeptic symptoms and especially pain after eating. A year afterward she began vomiting soon after meals, from the fact that vomiting gave temporary relief from the pain. The pain usually began a half hour after eating and would last for three or four hours, or until the stomach was emptied by free emesis. The vomiting at first was only after eating, but within a few months it would come on at any time, and usually nothing but a quantity of ropy mucus was thrown up. She would vomit as many as a dozen times a day. Her nourishment the first six months was good. For the whole time of her illness she had a pain in the epigastrium, the area of same being half the size of the hand, and exactly in the center of the body. This pain has been transmitted posteriorly. Tenderness on pressure has been a marked symptom from the beginning of her illness. For the last six months she has been vomiting considerable blood each day, and recently has had some severe hemorrhages: a quart at one time being the most. At the time I saw her she was vomiting repeatedly during the day and night, and an abundance of blood was present each day. She was much emaciated, and her facial expression was one of pain and "tired-of-life" character. She had a scaphoid abdomen, with hard abdominal muscles. Tenderness on pressure in the hypogastrium was well marked. The stomach was not dilated, in fact, appeared contracted, as the stomach resonance was diminished on percussion.

A diagnosis of malignant ulcer of the pyloric end of the stomach was made and an operation advised for its relief: the procedure advised being a gastrojejunostomy. This operation was performed, using a large-sized Murphy button. The lowest portion of the anterior wall of the stomach was selected as the site for the anastomosis to a coil of jejunum fifteen inches below the pylorus. At the time of the operation an ulcer two or more inches in diameter could be made out in the posterior and upper border of the stomach near the pylorus. Some adhesions to the under surface of the liver could be defined. Her recovery from the immediate effect of the operation was rapid. She did not vomit for two or three days, when she had two slight vomiting spells. At the end of the third day she was taking liquid nourishment, relishing the same and retaining it. In a few more days she was taking solid food, in the way of steak, eggs, etc. During her three weeks' stay in the hospital she did not vomit a dozen times, while before her operation she vomited a dozen or more times daily. Her bowels became regular, her facial expression was completely changed, and her bodily nourishment was materially improved in that time. She passed the button six weeks after the operation. It is now ten weeks since the operation and the physician, Dr. Huffman of Columbus, Kans., writes me: "She is doing well; is able to walk to town, a distance of three-quarters of a mile. She complains of a slight nausea at times, but it is growing less. I think you have had an excellent result and she is well pleased."

Case 2.—Mr. C., age 38, eighteen years ago began having digestive trouble. It was noticed at that time that solid particles of food in the stomach gave rise to more or less pain. A year or so later vomiting began as a symptom. This vomiting was usually produced by the presence of food in the stomach. After the stomach was emptied the pain would cease, and the patient would be fairly comfortable until after another meal. On one or two occasions he had quite a perceptible show of fresh blood in the vomited material. This painful condition continued up to the time of my first examination. In addition to the above history I learned from the patient that large quantities of material would be thrown up that had been retained in the stomach for two or three days. As much as twelve or fourteen pounds of strongly acid, offensive material would be thrown up from the stomach at one time. This usually brought some relief, but even when the stomach was emptied of its solid contents gaseous distention would go on, producing great distress from the pressure of the enormously dilated stomach. Cardiac and pulmonary dyspnea was a very prominent symptom as a result of this pressure against the diaphragm.

He had lost very much in weight at the time I saw him, and weighed only 115 pounds, was taking 20 grains of morphin a day and was in a desperate condition in every sense of the word. My examination revealed an enormously dilated stomach and a very much emaciated patient. There was no tenderness on pressure at any spot over the abdomen; no enlargement or induration could be detected through the thinned abdominal walls. A diagnosis of pyloric obstruction resulting from the healing of a non-malignant ulcer was made. An operation having in view the establishing of a free communication between the stomach and the lower alimentary tract was advised and accepted. It was noticed in the examination that the pylorus was very low and unusually far to the right of the median line. For this reason, at the time of the operation, the incision was made in the right semilunaris, believing that it would give the nearest approach to the most dependent portion of the dilated organ. The correctness of this decision was verified at the operation. I found on opening the abdomen the stomach very much dilated, but in position, as before described. Believing, as I do, that all of these operations should be primarily drainage procedures, the anastomosis was made nearer the pyloric end of the stomach than that usually advised or found necessary. The incision in the stomach was made in its anterior wall, about four inches from the pylorus. A coil of the jejunum 15 or 18 inches below the pylorus was selected as the suitable site for the incision in this portion of the canal. The usual precautions were used in the application of the sutures in the use of the Murphy button.

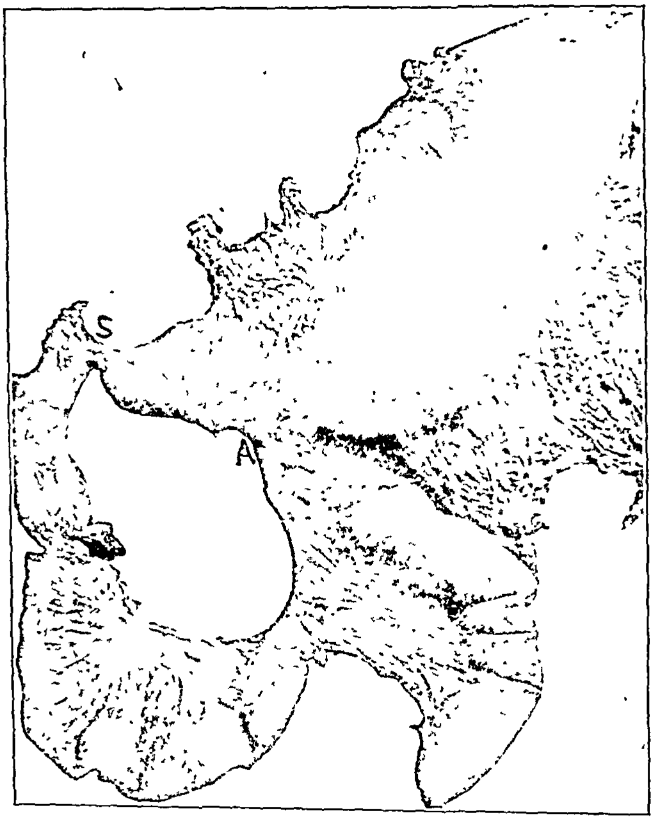

Fig. 1.—Gastrojejunostomy. Pyloric stricture (S) from healed gastric ulcer. Pyloric end of stomach displaced downward, hence the location of anastomosis (A).

The operation was quickly performed and the patient returned to bed in good condition. Following the operation there was no unpleasant symptom. In a few days he was able to take the necessary nourishment without any inconvenience or pain following its ingestion. The morphin was withdrawn from him, and at the end of three weeks he was not only broken of his morphin habit, but was able to return to his home, taking both liquid and solid nourishment with perfect comfort. He continued to improve until his former good health and weight were regained. He increased in weight until he weighed 180 pounds and was strong and able to do any work that was necessary for him to do. His digestion was perfect and free from pain; the gaseous distention disappeared and the stomach seemingly regained its natural size and tonicity. He continued in this state of health for six and one-half years. He was then taken with acute pneumonia, and within two weeks died as a result of this attack.

I was fortunate in being able to make a postmortem in this case. On examining the stomach I found that there was a complete obstruction of the pylorus (Fig. 1): that the stomach had regained its former size; that its muscles were well developed and in a healthy condition; that the portion of the duodenum and jejunum above the point of anastomosis, while in a healthy condition, showed well-marked evidence of atrophy from disuse. At the site of the anastomosis there was absolutely no omental or other adhesions except those made by the union of the bowel to the stomach. The opening from the stomach into the lower segment of the bowel was as large, seemingly, as at the time of the operation. There appeared to be a species of valvular action that prevented the contents of the stomach from going into the upper coil of the bowel. A similar arrangement seemed to exist preventing the bile from going into the stomach. On filling the stomach with air or water not one drop or bubble could be forced through the pylorus. The water would enter the lower segment of the bowel with perfect ease, but none at all would go into the upper segment until after the stomach and lower segment of the bowel were thoroughly distended.

As remarkable as it might seem, the Murphy button, instead of passing into the intestine and finding its way out into the external world, as is usual, had dropped into the stomach and remained there for nearly seven years, or until the time of his death. Its presence in the stomach had never given rise to a single symptom. One end of the button was very much destroyed, presumably by the secretions of the stomach.

The accompanying illustrations show very distinctly the strictured condition of the pylorus, also the perfect anastomosis between the bowel and the stomach. It also shows the distended condition of the stomach and the lower segment of the bowel with very little distention of that portion of the intestine above the site of the anastomosis.

While the dropping back of the button into the stomach might be used by some as an argument against its use, this objection would certainly lose its force from the fact that not a symptom was produced by its presence, and also from the fact that the time of performing the operation is very much shortened, a no small item in many of these cases. The greatest of all in favor of the button is the fact that nearly every one of these cases recover from the operation if the work is properly done.

This case illustrates a condition following the healing of a gastric ulcer, the scar causing pyloric stricture.

Case 3.—Mr. S., age 48. Twenty-five years ago this man had quite a severe hematemesis. This was followed by a long period of gastric pain and uneasiness after eating, with occasional vomiting spells. These symptoms troubled him for a number of years, then for several years he was comparatively healthy. About two years ago he began having a burning in his stomach after eating, with an occasional eructation of a sour, foul-smelling liquid. He was troubled from gaseous distention of the stomach and bowels. Constipation was a marked feature. Soon occasional vomiting attacks were noticed and he began losing flesh. He became very much emaciated and cachectic in appearance. He had a long course in gastric lavage and dieting, with no improvement in his general condition. One year ago he left his business (wholesale merchant) and spent several months in the south. During his stay there he gained in flesh, and on his return resumed his former business; but he was soon compelled to stop on account of his old symptoms, returning. He lost thirty-six pounds in five months.

I find on examining him that he is very anemic and much emaciated, with a look of care and uneasiness depicted on his face. I find the tongue coated brown and the breath very offensive. (This has been a feature of his case for several months.) The lower portion of the abdomen is flat and the muscles tense and dry. No gases in the intestines. Stomach distended with gas two inches below the umbilicus. Sense of resistance and pain on pressure in the region of the pylorus. No tumor discernible; vomiting several times each day. No solid food tolerated by the stomach, and practically all liquids rejected after remaining in the stomach for a few hours. Coffee-grounds-looking material is vomited often. A test meal showed: Total acidity, 20; reaction faintly acid; free acid, 0; HCl, 0; lactic acid, small amount. The examination by Dr. Wolf four weeks after operation showed: Total acidity, 75; reaction strongly acid; free acid, 0; HCl, 0.

A diagnosis of probable non-malignant partial stenosis of pylorus was made, resulting in dilatation of the stomach.

The early history of this case was one of gastric ulceration, later a healing of the ulcer, then a reformation of a benign or malignant ulcer at the site of the old scar, with a pyloric stenosis and gastrectasis. Operation was performed on the anterior wall of the stomach at the most dependent point.

Eight years ago I laid stress on the importance of making the opening in the stomach in a position that would act as a drainage opening (Figs. 2 and 3). This case since the operation has been one of continued comfort and improvement. He is taking an abundance of food, and is gaining strength and weight. He has not vomited a single time since the operation; neither has it been necessary to wash the stomach, this being required twice a day before the operation.

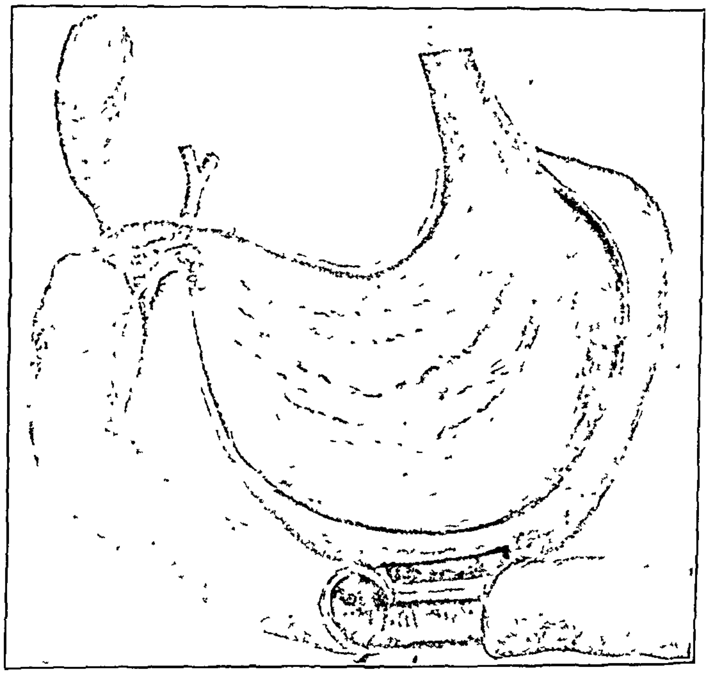

Fig. 2.—Showing that opening should be made in bottom of stomach.

The medical management of 50 per cent. of these cases is quite satisfactory, but I know of no class of cases requiring more patience on the part of the physician, and more faithfulness on the part of the patient in carrying out the instructions.

There is a class of cases where either from want of favorable surroundings or for want of persistent assistance from the patient the medical management of these cases is a total failure. There is yet another class of cases in which, regardless of all faithfully tried remedies, the disease goes on year in and year out, with no indications of a permanent recovery; while there are a class that from the dangerous symptoms induced require some line of management more certain and rapid than the slow expectant treatment usually carried out. For instance: Starvation, severe pain, persistent vomiting and alarming recurring hemorrhages. Of the medical management I will have very little to say in this article, but confine my remarks to the management of this class where a fair trial of that line of management has been given and failed.

The excision of a gastric ulcer, would, on first thought, appeal to one as the ideal method of dealing with such cases, but when we take into consideration the difficulty of defining the limit of the ulcer, the lowered vitality of scar tissue in its efforts to unite, the extensive adhesions of the bottom of the ulcer to surrounding viscera, and the dangers of hemorrhage and injury to other organs in separating these adhesions, we then can understand why the mortality is so very high in excision of a gastric ulcer. The prime object to be sought in the healing of a gastric ulcer is to maintain the health standard by proper nutrition, removing all sources of irritation possible, giving the parts rest. How are these ends best obtained? In the rebellious cases where the uncertain nutrient enemas can not be carried on for the proper time, and where the liquid diet will not be adhered to, where there is persistent pain, alarming hemorrhages, or where the patient is so situated that he or she can not afford to wait on the slow, uncertain, hard to carry out, and expensive medicinal method, there the case becomes a strictly surgical one. A gastroenterostomy fulfills or meets most of the indications in such cases. By selecting a site for the anastomosis in the most dependent portion of the stomach, the organ will empty itself by gravity as soon as any food enters it; thus getting rid of this source of mechanical irritation. At the same time the strongly acid secretions of the stomach are drained into the intestines and away from the ulcer. If efforts at vomiting should occur the stomach empties itself into the bowel through the non-valvular opening, and thus the nourishment of the body is maintained and the proper healing augmented by an increase of the reconstructive systemic powers. The motility of the diseased organ is best limited by this procedure and the ulcer permitted to have rest, so necessary in the healing of an ulcer, regardless of its location. The putrefaction of the retained food in the cases with a gastrectasis is prevented and the distention of the organ from the gases averted, thus permitting a contraction of the edge of the ulcer, and preventing the tension of the same that may lead to increased pain or a hemorrhage.

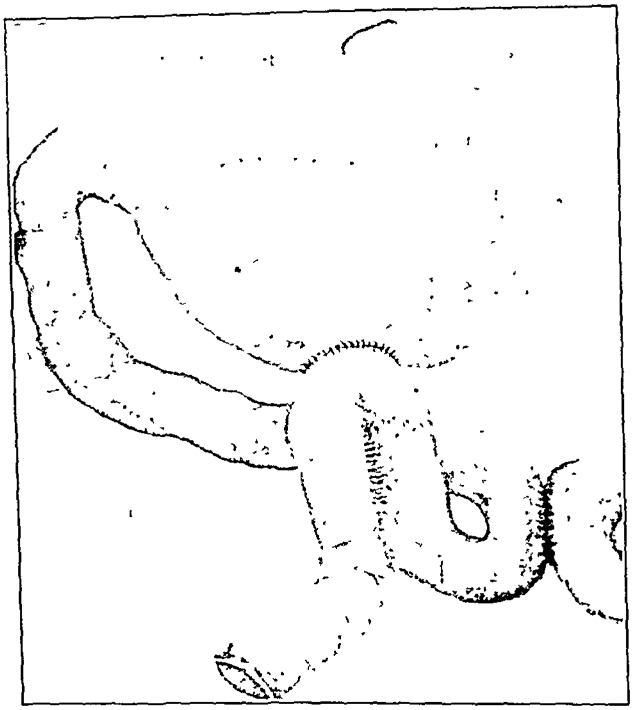
Fig. 3.—It is not necessary to do multiple operations

The mortality in a gastroenterostomy is very low in skilled hands, and the relief of symptoms and cure of the ulcer is to be expected in the great majority of cases.

DISCUSSION.

Dr. J. H. Carstens, Detroit—I endorse what the essayist says and to add that in these cases of pyloric obstruction from other cause, where there seems to be a simple contraction, operative correction is simple, but I do not believe that I would put in a Murphy button and leave it there for six years. I use the McGraw ligature, which is simple and can be inserted quickly, and there need be no fear of brass poisoning.

Dr. John G. Clark, Philadelphia—Two points occur to me: 1. How long shall these cases remain under medical care before being subjected to surgical interference? 2. How shall one best and most quickly locate the ulcer? Because a considerable proportion of cases of gastric ulcer will heal spontaneously under careful medical treatment, precipitate operation is unwise. Only after the case has been carefully treated for a sufficient time to determine its chronicity, or when urgent symptoms, such as peritonitis or excessive hemorrhage, occur is it wise to operate. In several instances I have advised a waiting policy, even when the symptoms were rather exaggerated, and thus far I have had no occasion to regret this course. When, however, through its chronicity, or, as said above, through threatening symptoms, the patient's life is seriously jeopardized, an operation should be performed. The second question then comes up for consideration, how best to find the ulcer? Unless the pathologic process is chronic, associated with induration and superficial evidences of inflammation, it may be difficult or impossible to locate by palpation the exact site of the ulcer. Again, if the ulcer is situated on the posterior aspect of the stomach, adhesions may have taken place, making it difficult or impossible without great danger of dislocating the stomach, to bring it into the field of operation. It is, therefore, wise in these cases not to lose time in searching in this more or less haphazard and superficial way, but to make an immediate exploratory gastrotomy. The less vascularized portion in the anterior wall of the stomach, situated between the lesser and greater curvature, should be selected as the site for this exploratory incision. When the incision is made it need not necessarily be a large one. Not only may the stomach be efficiently palpated, but actually inspected. A small speculum or tractor may be inserted into the incision, and in one instance I was able to locate the ulcer with a small electric light. When the ulcer is located in the posterior wall and is bound down by adhesions, it is not wise to break up these adhesions, for the edges of the ulcer may be sufficiently pared and sutured directly through the incision. This is by all means the safest method, and is in direct accord with the method of suturing described by Connell.

Dr. C. O. Thienhaus, Milwaukee, Wis.—When one of the larger arteries of the stomach is eroded by the ulcer, the hemorrhage is usually so severe that the patient succumbs before there is a chance for operation. In regard to other cases of acute hemorrhage I would warn against immediate operation. One may observe patients with severe hemorrhage and anemic to such a degree that one believes nothing but surgical interference can save his life, but usually the patient recovers by proper internal treatment, while operation is extremely dangerous and the mortality, as statistics show, enormously high. For this class of cases, as well as for hemorrhage from typhoid ulcer, I highly recommend gelatin, either by mouth or rectum. I would not like to go on record as claiming gelatin to be a panacea for internal hemorrhages; but, as above cited, it is of great value, and ought to be given a trial before taking the responsibility of operating in the acute stage of hemorrhage. I would like to ask Dr. Cordier whether, when he uses the Murphy button, he makes use of the generally employed purse-string suture, or does he, after having made the smallest incision possible and having inserted the button, use only one suture in each corner of the transverse incision, a method which has been highly recommended lately. In regard to pylorectomy versus gastroenterostomy in cases of ulcer of the pylorus, when the patient is over 40 and has been suffering for a long time from a chronic ulcer in this region, I always prefer if possible pylorectomy because many of these chronic ulcers about this age show a tendency toward malignancy and the differential diagnosis is sometimes extremely difficult even during operation, whether the ulcer is still benign or malignant.

Dr. F. F. Lawrence, Columbus, Ohio—Too little attention has been paid to the point that there is a stage of acute danger in gastric ulcer—the danger of perforation. If there be one condition more than another in which abdominal surgeons should urge the abandonment of medical treatment and the institution of more radical measures, the closing up of the lacerated surface, it is that of gastric ulcer.

Dr. Cordier—I would not advise, in the majority of instances, to operate during the hemorrhage. In fact, you rarely see one of these cases during an alarming hemorrhage. It is remarkable how cases seemingly nearly bleed to death and then recover. These cases are desperate and the thing to do is to operate and to operate quickly. An operation extending over thirty or forty minutes will prove fatal in the majority of cases. My preference is the Murphy button; the establishment of an anastomosis and doing it quickly, using a purse-string suture, completing the operation in fifteen minutes. I use the button in the anterior wall. Many have recommended opening into the posterior wall, but this is not necessary. It makes the work look bulky and as if done by a tyro. The main thing is to make these operations drainage operations; make the opening in the bottom of the stomach, or otherwise you will have the accumulation and decomposition of food and a renewal of the old symptoms. If you make the opening in the bottom of the stomach the food passes right through. The patients can not vomit, and if they do the vomit goes through the intestine and not up through the esophagus.

HYGIENE OF YOUNG GIRLS.*

J. H. CARSTENS, M.D.

DETROIT.

The hygiene of young girls has been discussed and written about so much that it is utterly impossible for me to say anything new or even to present the subject at a little different angle than you have looked at it before.

When I speak of young girls I naturally mean during the age of puberty. We can divide the subject into mental and physical. The hygiene of the body is comparatively easy if the young girls are raised in a primitive state of civilization. Still, again, here there is a great difference. In some of the primitive races, as with certain tribes of Indians, girls have to do hard work, and do not grow up unrestrained as they do among some other primitive people. In the South Pacific islands, for instance, where they grow up without care and restraint, romping, playing, swimming, there they develop even muscular figures and healthy bodies.

This we can not do in civilized communities. As they grow up, some of the children in Europe, for instance, are obliged to carry heavy burdens and do hard work with poor food. They may be muscular, strong and have large bones, but they do not have handsome and graceful figures nor the intellectual training which we desire.

You take, however, our own so-called better class, who have chances for physical development. In New England, where everything is esthetic and where the mental training is beyond the brain capacity, we find just as lamentable a state of affairs in another direction, yes, even worse than we do with the overworked peasantry of Europe.

What modern civilization desires is an even development of the body and mind. This is a very difficult problem, as we have to contend with a long train of ancestors and their hereditary defects in one direction or another. It is not necessary for me to go into the old question of heredity in its relation to rheumatism, gout, tumors, tuberculosis, and so on. I want especially to dwell on the hereditary predisposition of the nervous system. Insanity, alcoholism, epilepsy, and the like, I need hardly dwell on them, as they are so well known. When, however, we have to deal with that condition we call neurasthenia and hysteria, it is very difficult. Naturally, as a rule, it is the mother who transmits this, and by her lack of mental balance strengthens and intensifies this condition in her daughter, and if the father is also weak and soft, and permits and encourages this state of affairs, it is a very difficult thing indeed for us to manage such cases.

The constant suggestion of the mother has its effect on the daughter, and she is finally imbued with the thought that she is nervous and can not help it. All our efforts to improve the condition are negatived by the mother with the statement, "Oh, she can not do that, I never could either when I was her age. She is too weak, my nerves were too weak also," and so on. We might just as well give up unless we can get the young girl away from home and put her under different surroundings. She must be entirely taken away from the influence of the mother and have the care of a trained nurse, who will teach her and who, by constant suggestions in another direction, can show that she is not nervous, not so weak and delicate as her mother thinks. And in the course of a few years a wonderful change can take place. Again, there is the mother who constantly suggests, month after month, that there must be something the matter with her daughter, with her menstrual function, until it is impressed on the young girl's mind that there really is some trouble, and she will always think in the future that her pelvic organs are weak. So I could go on with numerous other points.

If we now turn and go to the opposite extreme, among the poor and poverty-stricken, we find that children are made to work very hard, to carry burdens, to lift their little brothers and sisters, perhaps have improper food, and thus often produce injuries of all kinds, rupture, curvatures, chlorosis, etc.

Ignorance on the part of the mother is very frequently the trouble. In all these cases it is the mother that must be treated. We must get her to understand that we must reform her, and show her how to properly treat, manage and train the daughter so she will grow up strong and healthy. And in nearly all cases with the right kind of argument and teaching we can get the mother's mind so stirred up that we will have comparatively little trouble in managing these cases properly.

This class of young girls must often work at quite an early age, and we should regulate the kind of work that each one is capable of doing. Fortunately a great deal is being done by the state in the enactment of laws regulating the lines of work. These kind of laws should be encouraged, as they tend to improve the health of the young girls. First, in regulating the hours of labor. Secondly, proper ventilation. Thirdly, in proper toilet facilities. Fourth, in the opportunity of getting food at proper intervals.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Obstetrics and Diseases of Women, and approved for publication by the Executive Committee: Drs. A. Palmer Dudley, H. P. Newman and J. H. Carstens.

This brings us to the question of physiology. In all these cases, rich or poor, we must regulate diet above all other things. Medication also sometimes will be required, but comparatively little. The various gymnastic sports should be encouraged, but regulated by the physician. This is the only way we are able to reach some people and make them take the necessary exercises. The one trouble with most of these are that they are lopsided, will develop only certain parts of certain muscles and parts of the body, while it is so essential to have a systematic and symmetrical development of the body. We are not always able to reach our ideals with stubborn and selfish patients, but we must do the best we can and always strive for it.

Trying, therefore, to guide the young girl to strong and vigorous motherhood, it is not necessary to pay any attention to the menstrual function. That will come without trouble unless there are organic defects and changes which will have to be looked after and remedied, but that does not concern us here.

If we now consider the mental development we have the greatest difficulty. If their physical weaknesses are marked, the mental training should cease or be checked. In this we will have comparatively little trouble. The rich will be willing to do so because they seem nearly always anxious to stop their studies or postpone them on the slightest provocation. This holds good especially with the so-called shoddy. With the poor and the middle classes we shall have out greatest trouble. If the young girl has been animated by ambition to be something in the future, to be able to support herself, and perhaps often to assist her parents and younger brothers or sisters, we will have a very difficult task if such a person is physically weak. If we allow her to go on with her mental work her physical condition will probably become still worse. She is liable to have an undeveloped uterus and conditions of the system produced by it; poorly developed lungs, weak heart and arteries, flabby muscles, feeble digestion, malnutrition of the nervous system and final collapse. The latter sometimes they will become when the goal is reached for which they struggle: the diploma, the teacher's certificate or whatever it may be. She has a mind educated for requirements of that position, and a body feeble and weak, and if she marries she will be a burden to the poor husband, in fact ultimately will probably be divorced or a subject to a series of operations, which will be done to remedy her defects.

One of the greatest difficulties is that these people learn with difficulty. They have not the right kind of brains; they have to study hard until late at night to get their lessons. This intensifies and hastens the physical downfall. Such persons should stop mental work for a year or two and do some other kind of work. When the body is more developed they can resume their mental efforts. They often object to this, but we can manage them all right if we insist on it. People with the right kind of brains and quick perception can continue studies and with a proper amount of physical training they will get along all right.

The question of age in all these cases cuts no figure in my opinion. Either mentally or physically some girls are further advanced at 12 than others at 18.

In conclusion, let me say that hygiene of young girls is one of the most difficult problems for the gynecologist to solve. There are no mathematical problems, no rule that is even elastic within a certain limit, but every case almost is absolutely distinct and requires to be studied by itself. The hereditary predisposition, the surroundings, the future course, the position in life, the means at their disposition, the development of the different parts of the body, or the lack of development of certain parts, the assimilation and elimination of the various organs, the brain and the kind of brain, how it should be developed in one direction or another, and a thousand and one things must be considered in each individual case. Added to this there must be that fine tact and that absolute control over individuals, so that we can not only manage the young patient, but also those around her, be it the mother, father, sister, cousin or aunt. We must get them all under our control ere we can expect to accomplish anything.

We are able to teach the students but very little. We can give them a few hints, but the cases are so diverse and complicated that every medical man must work out each case for himself.

PELVIC DISEASES IN YOUNG GIRLS.[*]

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The popular prejudice against examination of the genital and pelvic structures in young girls is not confined to the laity, but, unfortunately, exists in the minds of many of the medical profession. There can be no question that on this altar of prejudice many otherwise useful lives have been sacrificed. The voice of this Section raised in protest will bring fruitage in healthier women, happier wives and more devoted mothers.

First.—The young have, with those older, an equal right to relief from suffering and an equal right to protection from diseases which destroy their usefulness and may endanger life.

Second.—Many, if not all, diseases of the pelvic structures are, in their incipiency, curable without recourse to operations which sacrifice important organs or parts.

Third.—Delay in recognition of, or correction of even the simpler conditions, such as displacement of the uterus or ovaries, may, and too often does, result in such organic change as permanently to destroy all function and render the patient an invalid, forever sterile.

Fourth.—The symptoms, pelvic pain, menstrual pain, menstrual irregularity, neurotic explosions, digestive disturbances, etc., occurring preceding, during or following the menstrual effort are only warnings and strong hints for us to seek the cause.

Fifth.—That the pelvic conditions of the young girl can be discovered by feeling the pulse, examining the tongue, and looking wise is no more true than it is in older persons.

Sixth.—A certain amount of modesty and respect for traditional sentiment is probably a protection to the sacredness of woman's chastity, but a chaste life is no way [illegible] an honest purpose in dealing with [illegible], and no man will, by an honest, clean, manly effort to discover the cause of suffering, excite impure or degrading thoughts.

Seventh.—We must remember that not only the physical, but the social, the domestic, and even the moral, life of the patient is involved in this question. She may, because of our neglect to ascertain the condition, be rendered hopelessly sterile, and, consequently, that unhappiest of human beings, a childless wife.

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[*] Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Obstetrics and Diseases of Women, and approved for publication by the Executive Committee: Drs. A. Palmer Dudley, H. P. Newman and J. H. Carstens.

Eighth.—Our first duty, then, should be the protection of the physical temple of those entrusted to our care. A sound physical organism is, I take it, the surest protection against moral degradation.

Symptomatology is sometimes very misleading, inasmuch as the entire history and symptom-complex, as gathered from patient or her mother, direct attention entirely to the nervous system, circulatory system, or digestive tract with the single exception that the disturbances develop at or about the time of puberty.

The most common and probably the most important of the symptoms presented, when rightly interpreted, is menstrual pain. Menstrual pain is not a disease, and should never be so considered. It is but a symptom. It probably is never a condition which has not a definite pathologic cause. These causes may be:

- Pelvic
  - 1. Uterine
    - a, Displacements.
    - b, Infantile uterus.
    - c, Metritis.
    - d, Uterine fibroids.
  - 2. Intrauterine
    - a, Endometritis.
    - b, Uterine polypus.
    - c, Submucous fibroid.
  - 3. Ovarian
    - a, Chronic ovaritis.
    - b, Prolapse of ovary.
  - 4. Tubal
    - a, Septic salpingitis.
    - b, Catarrhal salpingitis.
- Extrapelvic
  - Neurasthenia.
  - Anemia
  - Chlorosis.

I have offered this arrangement of the causes of menstrual pain because I believe the older classification of obstructive, neuralgic, ovarian, tubal and membranous dysmenorrhea has too much tendency to mark this symptom as an entity and thus prevent the proper study of its cause. Many cases in which the pain is agonizing present absolutely normal pelves. These are the cases in which everything depends on care and patience, and they are of such import as to merit consideration apart from those which have a pelvic cause.

Of the pelvic causes, first, displacement, *per se,* is of the least import. A displacement of the uterus does not in itself give rise to menstrual pain, the old theory of obstruction being untenable.

The pain in these cases is due to the resulting inflammation of the uterus, tubes or ovaries; or if it be an old displacement we may have adhesions. The cure of these depends, of course, on the correction or removal of the pathologic lesion causing it, as, in fact, it will in all cases; but I would emphasize that the displacement, while a primary, is the smallest factor in the case.

In the infantile uterus the entire effort at preparation of the mucosa for fecundation and menstruation is abortive. In many cases menstruation never occurs, or, when it does occur, it is not a free or natural effort. It is an attempt on the part of Nature to prepare an organ for a function to the fulfillment of which it is totally inadequate. First, the mucosa is only partially developed; second, the stroma of the deeper layer of the mucosa and that of the superficial layer are one, and in almost embryonic condition. The only cure is to be found in such measures as will develop the uterus (an almost hopeless undertaking except the girl marry and become pregnant) or in the removal of the tubes and ovaries.

In metritis we have a prolific cause. The explanation is, first, irritation of uterine ganglia causing expulsive contractions; second, pressure on pelvic vessels in the deeper portion of the mucosa, which prevents leucocytes reaching the superficial portion, retards the amyloid degeneration in superficial mucosa, and results in more or less destruction of mucosa. This I believe to be the true cause of that distressing condition known as membranous dysmenorrhea, only in these cases the results are all extreme. In endometritis we have predominating a glandular inflammation; the glands enlarge, crowd each other, press the superficial layer into a smaller space, obstruct the superficial capillaries and retard amyloid or hyaline degeneration; the capillaries in the stroma become congested, rupture, pour out their blood, form lacunæ, and literally tear the epithelium from its moorings. This is probably the condition in which the older writers thought there was some obstruction in the cervix, and because dilatation brought relief, gave it the name of "obstructive dysmenorrhea." In these cases due to metritis or endometritis, no permanent benefit can be expected from any method of constitutional treatment. The local condition must be relieved by curettement, or in some cases by judicious local treatment, and here let me emphasize that we should impress on the minds of the profession that curettement is by no means a minor operation, considered from a standpoint of safety. The hand that wields a curette should be capable of any operation which demands skill, guided by that judgment which can and will recognize the existence of pus in the tubes or other intrapelvic structures, for the reason that curetting in cases complicated by pus tubes is a most hazardous operation. The general condition demands most careful attention. More harm is done these women by tinkering, or inefficient local treatment, than by letting them alone. In the majority of cases the curette, rest for two weeks in bed, general tonics and the correction of constipation will accomplish a cure when local applications may, and often do, result in placing the case beyond hope of relief by simple measure.

Uterine fibroids and uterine polypi cause menstrual pain by mechanical obstruction of the pelvic vessels and compression of the pelvic nerves. The cure lies in their removal, or the artificial menopause by the removal of the tubes and ovaries.

Fibroma can not be considered common in young girls, but that a fibroid may be the cause of very serious trouble is shown by the following case:

Miss J. F. E., aged 15½ years. First seen Jan. 14, 1902. Menstruated first at 12, very profuse and lasting six days, accompanied by severe menstrual pain throughout. Has menstruated every three weeks since until past four months, during which she has menstruated every two weeks. Suffering has lately become intolerable. Two years ago noticed a hard, non-sensitive lump to left of median line, low down. This has grown slowly. About three months ago noticed a dull aching in left loin, and a few weeks later a sensitive lump just below left ribs. Examination revealed what was apparently a myoma developing to the left side of the uterus between folds of broad ligament; another mass, which was indistinctly fluctuating in region of left kidney. Operation disclosed a fibromyoma pressing on and occluding the left ureter, with a resulting hydronephrosis and hydroureter. A myomectomy resulted in complete relief of all symptoms.

Salpingitis is a fruitful source of menstrual pain. In the majority of these cases we have simply the result of a neglected endometritis, i. e., the inflammation has extended from the uterus to the tubes. It is suppurative or non-suppurative. The suppurative, although the more dangerous to life, does not give rise to severe menstrual pain until adhesions have formed as a result of peritonitis. That form which is an extension of a catarrhal endometritis results in early occlusion of the tubes, hyperplasia of both the tubal mucosa and muscular wall of the tube, venous engorgement of the tubes and ovaries, and a varicose condition of the ovarian veins. It is in this condition we find the most pronounced premenstrual pain, which is relieved in a few hours after the flow is established. Here the preceding and accompanying endometritis is an important factor. The timely use of the curette will prove our best aid. Let me here urge the necessity of determining the absence of pus tubes before resorting to the curette; for the operation of curetting, when pus tubes exist, is fraught with greater danger than is the removal of the tubes. There is a form of inflammation of the fallopian tubes which occurs as a sequel to the exanthematous diseases. It is usually bilateral, and is nearly always complicated by peritonitic adhesions. The pain is severe at menstrual epochs and resists all forms of local or general treatment.

The consideration of those cases which have an ovarian cause will involve the relation between ovulation and menstruation; a subject too great to be discussed in a short paper. For our purpose it is enough to remember that each month the uterine mucosa develops preparatory to the reception of a fructified ovum, and when that ovum is not impregnated degeneration with rupture of superficial vessels and denudation results in menstruation. Intermenstrual and premenstrual pain can always be attributed to the tubes or ovaries. When to the ovaries we must determine whether it be hyperemia or ovaritis.

Ovarian hyperemia is a common cause of menstrual pain in young girls. Its cause being excitement and ungratified sexual desire, it is apparent that treatment should be such as to direct the patient's thoughts from the genital organs. A change in the social and domestic habits is of prime import. The importance of relief is emphasized by the fact that if unrelieved this condition soon results in chronic ovaritis, hyperplasia, increase of fibrous tissue and complete destruction of the ovary. In the latter condition the pain becomes more severe, more prolonged, and its cure involves the removal of the organ. It matters very little whether the form be cystic, interstitial or hyperplastic, except that the pain in interstitial ovaritis is most severe, while in the cystic we are most likely to find prolonged or profuse flowing, and in many cases intermenstrual hemorrhage. The treatment of any form of chronic ovaritis is too often disappointing and requires for permanent cure the extirpation of the diseased ovaries.

In all these cases the temptation to give opium is great and should be religiously *resisted*; for so sure as we give it we will make an opium habitué of our patient. In prolapse of the ovary the pain is due to the resulting inflammation of the tubes and ovaries, with the consequent congestion of the entire pelvic contents. There is no method of mechanical treatment which will correct the displacement. Two operative procedures are available: First, if the ovary be not too much affected we can lift it up and secure it by shortening the utero-ovarian ligament, or stitch it to the broad ligament. Second, if the ovaries are diseased beyond repair we can remove them. The power of repair is so great that I am inclined to think we can save a very large percentage.

There is a class of cases in which no disease of the pelvic organs can be detected, and yet the suffering is as severe as in those in which inflammatory trouble exists. These comprise neurasthenics, in whom there seems to be a constant tendency to explosions of all sorts; patients who are anemic or chlorotic. The occurrence of menstrual pain in those subjects is readily appreciated if we keep in mind the utero-ovarian nerve supply and the physiology of the sympathetic. The nerve supply of the uterus, fallopian tubes and ovaries is largely from the sympathetic, with a few fibers from the second, third and fourth sacral. The sympathetic fibers are from the inferior hypogastric and the spermatic plexuses. The hypogastric is a branch of the aortic plexus, which is derived from the semilunar ganglion and renal plexus on each side. If we remember that these sympathetic centers supply branches to all the abdominal viscera, and then keep in mind the fact that irritation or stimulation of a sympathetic nerve causes *contraction* of vessels, lower temperature, diminished nutrition and increased tissue waste in the parts supplied by it, the increased tissue waste causing increase of carbonic acid gas in the blood, which adds to the irritation, it is not hard to understand how a neurosis may have, as one of its symptoms, painful menstruation. Particularly is this true if we keep before us *the facts of the normal* menstrual process, viz., that there is, *first, an increase* of cell growth; second, multiplication of the stroma nuclei and hyperplasia of the superficial mucosa; third, widening of interglandular and intervascular spaces from *hyperplasia;* fourth, occlusion of capillaries, degeneration and rupture of smaller vessels, and finally, complete denudation of the uterine mucosa. Neither is it hard to understand how these physiologic processes may become abortive as a result of malnutrition in anemia and chlorosis. Great care is necessary in these cases that we exclude local organic disease, for, if there be an endometritis or other evident local inflammation occurring in these neurotic and anemic cases, I do not believe we ever accomplish any good by constitutional treatment alone, and they are certainly not to be operated on. That there are cases of nervous disease dependent on pelvic trouble we all know. The failure to discriminate between those in which the pelvic disease is the cause of the nervous symptoms, and those in which the neurosis is the primary affection has done much to retard the acceptance of operative assistance, by alienists. I would emphasize the statement that operative measures can not be expected to relieve nervous symptoms except when adopted for the removal of distinctly diseased organs, to the condition of which the nervous symptoms may justly be ascribed. On the other hand, I have seen some marked neurotic conditions relieved without further treatment by the removal of diseased ovaries and tubes, or the plastic repair of an enlarged and indurated cervix.

That a leucorrhea always is a symptom of disease of either external or internal genitalia should be kept in mind. That the cause of leucorrhea may be any one of several serious conditions should demand thorough investigation in every case, whether young or old. Tuberculosis of the genital organs is by no means so rare as has formerly been taught and may be the cause of leucorrhea in very young girls. Gonorrhea, with all its frightful sequelæ, I have seen in a number under the age of 15 years, and in two cases under 8 years. Herpes genitalis may occur at any age and gives rise to profuse discharge. Traumatism may be a factor of leucorrhea in some cases. The fact is no patient who has leucorrheal discharge should be treated in any manner whatever until the cause has been determined with reasonable certainty. Profuse and irregular menstruation may be symptoms of such grave import that it would seem scarcely necessary to insist on these cases being thoroughly examined were it not for the fact that we are continually confronted by the statement, made apparently in good faith by active physicians, "that uterine hemorrhage in young girls only needs iron and bitter tonics to cure it." We can not determine whether the cause be metritis, endometritis, polypus, fibroids, cystic ovaries or sarcomata, except by a painstaking examination, and as any one of these may be the cause it is our plain duty to determine which it is. It is equally our duty as gynecologists and as teachers to impress on the minds of our students and the profession, that it is more important to learn how to thoroughly investigate and diagnosticate these cases than to see us operate, or to listen to a description of technic.

SUMMARY.

1. All cases, whether in young girls or in older women, in which menstrual pain, intermenstrual or premenstrual pain is a prominent symptom should be subjected to careful and thorough examination to determine its cause.

2. No leucorrhea should be permitted to pass unnoticed or treated by such "slipshod" methods as ordering a douche, giving medicine, etc., without first ascertaining its cause. In all cases where discharge is purulent a microscopic examination should be made to determine presence or absence of gonococci, tubercle bacilli or other important septic organisms.

3. All cases of excessive flowing, intermenstrual hemorrhage or prolonged menstruation should be thoroughly examined.

4. In all cases where amenorrhea exists every effort should be made to find the cause.

5. In young girls subjects of neurotic symptoms which develop at puberty or occur with each menstrual epoch, a careful and thorough examination of the pelvis will often reveal the cause.

6. If menstrual pain, irregularity, leucorrhea and neurotic disturbances follow the exanthemata, a pelvic examination is imperatively demanded.

7. In all virgins the rectobimanual examination should be used—the vaginal touch only being used when absolutely necessary.

DISCUSSION

ON PAPERS OF DRS. CARSTENS AND LAWRENCE.

Dr. L. S. McMurtry, Louisville, Ky.—This subject has been greatly neglected by the Section, but has been discussed at length in the special societies. It is a common occurrence for the gynecologist to see young girls whose health has been wrecked by that complex condition known as neurasthenia, when all of the trouble could have been avoided. These young girls pass from one practitioner to another without getting any relief; from the general practitioner to the oculist, and then to the gynecologist, and many finally go to the neurologist. These cases should receive proper attention from the gynecologist, and there is as much to be done by withholding local treatment in many instances as in giving special treatment in other cases. There seems to be a prevailing idea that any young woman who has a disturbance of nutrition with anemia, associated with nervous symptoms, must at once be regarded as possessing no other organ but the uterus, and the treatment instituted in the majority of cases is local rather than systemic. If we could institute some system, and I take it that that is Dr. Carsten's idea, that will be applied by the family practitioner and also by those engaged in special lines of practice, that will early arrest this condition which we call neurasthenia, which will alter the mode of life, environment and education, it would be one of the greatest advances made in any branch of therapeutics. There should be that co-operation between the family physician and the gynecologist that will ensure a sufficiently accurate selection of cases that require local treatment. But the patient should be protected from unnecessary operations and local treatments. Every one engaged in gynecologic work has a large number of these cases come to him, and up to the present time they are certainly among the opprobia of our art. They are usually referred in some other direction and do not receive that accurate therapeutic attention they deserve.

Dr. Hannah M. Graham, Indianapolis—The general practitioner frequently is too careless in making a diagnosis. For instance, I treated for gonorrhea a girl of 14, a child of one of the best families in the state, who had been under the care of a general practitioner for six weeks when her mother brought her to me saying that she had profuse leucorrhea. The physician's treatment consisted of a tablet every three hours, which gave no relief. The mother objected to an examination of the child, but I finally convinced her that it was absolutely necessary. I found that she had gonorrhea, probably contracted from the maid who took care of the children. It is better to examine one hundred girls who have not gonorrhea than to overlook one that has. We find many girls of 14 suffering from dysmenorrhea due to a retroversion or retroflexion, which can be corrected with a three months' tampon treatment. Why let it go on until it requires suspension or an Alexander operation just because she had not reached the right age? Whenever you find disease you have reached the age to treat it.

Dr. G. Betton Massey, Philadelphia—I think it is proper for this section to dwell on such matters. We should endeavor to work out plans for the practical application of the hygienic measures suggested. The fault in the imperfect development of many young girls lies in the mothers, in their housing, in over-clothing, and in their becoming over-finicky. It is hardly appropriate here, but in every section of the Association we ought to condemn the wearing of wool underclothing. In my opinion this is one of the most detrimental things that human beings do; the possibility of catching cold when the girl arrives at puberty is greatly aggravated by abolishing skin action by covering the body with an external skin of non-absorbent woolen material. Girls who spend all their time in the open air lightly clothed and taking plenty of exercise will not go to the gynecologist or neurologist. In the suburbs of Philadelphia the number of healthy girls is very great because an athletic life is fashionable. We can accomplish reform only with assistance of Dame Fashion herself. I agree that examinations are necessary when conditions do not yield to treatment, but I do think that many unjustifiable examinations are made in the clinics. Many young girls are examined when their bowels alone are abnormal; examinations are needed only in the case of girls who are suffering from septic conditions, such as a purulent leucorrhea, or from the manifest presence of a neoplasm.

Dr. C. L. Bonifield, Cincinnati—I heartily agree with everything Dr. Carstens said, and many things that Dr. Lawrence said, but with the side of the subject that seems to be very popular I am not in accord. I have seen cases that would have been much better for an examination, but these are the exceptions. I believe that there are hundreds of girls going to the office of the gynecologist who have no right to be there. They should be treated by the family physician. The symptoms that are referred to the pelvis are of constitutional origin; and if these girls are treated in the proper way, as Dr. Carstens suggested, if their general health is improved and the development of the uterus is encouraged by forcing nutrition, these symptoms will disappear without any local treatment whatever. Of course, there are cases that require an examination. These are the cases where the symptoms are unusually severe; cases that do not yield to the treatment I have mentioned, but I believe that they are greatly in the minority. When such a case comes to us for examination shall we proceed in the way Dr. Lawrence suggested, make a recto-abdominal examination, which is always more or less unsatisfactory; or give the patient an anesthetic and examine carefully so as to arrive at a correct diagnosis? I take it that the objection to examining young girls is not the destruction of the hymen, but it is the shock to the modesty of the young girl. She is subjected to a treatment of which she really should know nothing. Her attention is called to organs of which she should not think at all.

In the majorty of cases if they need an examination they also need operative treatment, and while they are under the anesthetic the little operation, which is usually a curettage, can be done. The objection to local treatment is overcome; our diagnosis is accurate, and we have done the very best we can do for our patient. I believe that if an examination is necessary at all in a young girl it should be done under an anesthetic.

Dr. J. H. Carstens, Detroit—Dr. Bonifield has said all I want to say. If the young girls are let alone and live a natural life, they will not require the gynecologic finger nor much medicine. What they need is physiology. They should get their eliminative organs into good condition so that they do not absorb excrementitious matter. Get the stomach into good condition, make good blood, and, if they have a little leucorrheal discharge, that will take care of itself. If they are a little nervous they will get over it. This gynecologic tinkering and the giving of all kinds of medicines without any indication for it is going too far. When they have well-marked symptoms of dysmenorrhea and a purulent vaginal discharge, then they should be examined and it should be done under an anesthetic. What I plead for is more simplicity, more physiology, and less medicine and fewer specula.

Dr. F. F. Lawrence, Columbus, Ohio—Dr. Bonifield's statement as to cases going to the gynecologist's office that do not belong there is true in many cases; but I would ask the members of this section whether it be proper or improper to have a thoroughly competent oculist examine a patient whose vision is failing as a result of chronic Bright's disease, to determine whether or not there is albuminuric retinitis. So far as the treatment of the case is concerned, it belongs to the general practitioner, but how many of us gynecologists, surgeons or general practitioners are competent to make a diagnosis of albuminuric retinitis? This is equally true in gynecologic work. Those men who have had the experience and the training are the men to make these examinations. The treatment of the patient can be carried out by the general practitioner, but if there is need for any operative work the gynecologist, the man who is skilled, should do it. Many cases suffer severely from irritable bladder, although I have found that this symptom exists only in patients having a lithemic or uric acid diathesis, and is rarely found in young girls, except in conjunction with pelvic disease. In from 75 to 80 per cent. of the cases in which this symptom exists it will disappear if you will correct the pelvic trouble and let the bladder alone. It is a constant symptom in every case of pus tubes and in cases of many other pelvic diseases. One of the most suspicious things a woman will tell you is: "Doctor, I have a great deal of trouble with my bladder." Find the cause of the trouble and remedy it; do it honestly, earnestly, manfully and fearlessly.

SKIN GRAFTING FOR THE RESTORATION OF THE EYELIDS.

REPORT OF CASES.*

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CHICAGO.

Skin grafting for the restoration of the eyelids differs quite materially from that in other parts of the body. The prime objects in operating are cosmetic and restoration of function. To attain these the part must be freely movable and not differ in color and appearance markedly from the normal lid. We have also a field for operation which is movable and uneven, making the results more difficult to obtain. It is for these reasons that I think a discussion of the principles involved should be of benefit.

The statements I shall make and conclusions I have reached are from my personal experience with these cases. Along with the successes I shall give an account of my failures, for I think I have learned more from these than from the cases where the results were satisfactory. I have used most of the forms of grafts described, the sliding graft, the pedicle graft and transplantation of skin from another portion, either full thickness (the Wolfe graft) or the shaving graft (the Thiersch graft). The choice of which one to use must be determined by the individual case.

The primary causes for operating are usually cicatricial ectropion produced by burns, wounds or destructive skin lesions, as blastomycosis and lupus, or to fill in the defect after removal of tumors of the lid. Fortunately since the use of the *x*-ray the latter cases requiring operation are not so frequently encountered.

In the cicatricial cases we usually have the skin destroyed for a large area, and frequently so deep that the field for placing the graft is devoid of the normal blood vessels, and nutrition is a problem to consider. The condition is very different when the cicatrix is fairly superficial and can be entirely cut through when forming a floor for the graft.

In operating on the upper lid we have conditions very different from those found when operating on the lower. The graft on the upper lid must be as light as possible so as not to interfere with movement or press heavily on the eyeball. On the lower lid we have a tendency to draw away from the eye and we must have support for the lid margin.

I shall not consider the many methods of filling in small defects from the adjacent tissue when there is healthy skin near enough to make it possible. A great many methods may be used, varying with each particular case.

PEDICLE GRAFTS.

The pedicle graft has, in a measure, fallen into disfavor. That it has a place and one which can not be filled by either the Wolfe or the Thiersch grafts I am sure. The advantages of the pedicle graft are that when placed in a region devoid of the normal blood vessels it still has a source of nourishment. It also has the firmness and substance which is very necessary on the lower lids when the muscular tissue is atrophied, and especially when it is necessary to remove the whole thickness of the lid with a tumor. Shrinkage is at a minimum and should not be more than 1/4 to 1/3 of the original size. It has also the advantage of being nearly like the skin it should replace and would only be conspicuous against the cicatricial tissue frequently surrounding it. Care, however, must be taken in men not to bring the hairy portion of the cheek around so as to transplant the whiskers on to the eyelids.

As to its disadvantages, the objection to the deformity which its removal may produce is of little importance, for the defect can be easily filled in by Thiersch grafts so that it is difficult to tell where it came from. The most serious difficulty I found was that they were too heavy for the upper lid, where I never attempt to use them now. In one of the first cases on which I operated a large pedicle graft was taken from the temple to form an upper lid, the greater part of which had to be removed with a tumor. It was so thick and rigid that the pressure produced corneal ulceration greatly complicating the condition.

WOLFE GRAFTS.

A great deal has been written both in praise and condemnation of the Wolfe graft. Before the shaving graft came into use it was practically the only means of filling in a defect where the pedicle graft could not be used. Considering the experience of myself and others whose work I have had the opportunity to observe, I think the greatest fault is its uncertainty. I have obtained good results at the time, only to see them completely disappear a few weeks or months later, and that even when the conditions seemed most propitious for a permanent result. In the best results I have obtained the graft did not retain more than half the size soon after the operation. This does not refer to the size of the graft before cutting, which should be four or five times the size needed. Shrinkage has varied in my experience from this amount to practically complete disappearance in a few months. If we will consider the changes which occur in a graft we may understand the reason for this. The original vessels of the skin undergo hyaline degeneration and new capillaries spring from the neighboring parts. The superficial epithelium is cast off and the dermic layer is absorbed and replaced by new connective tissue, leaving the deep layers of the epidermis as the only part of the graft remaining.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

In order to avoid shrinkage I have made my grafts as thin as possible and I find my results correspondingly improved. A very helpful suggestion was made to me by Dr. Arthur Prince, to stretch the graft and pin it inside out on a piece of sterilized board, and then with scissors and pincette remove all the tissue possible. Grafts treated in this way have little left but the epidermis, and their shrinkage is comparatively small.

Among the disadvantages in their use for cosmetic purposes is the difference in color and the growth of hairs. The color remains whiter than the surrounding skin in some cases for years, if not always. If a graft is taken from a hairy part of the body, as the arm or leg, there is apt to be a growth of hair that is very annoying. In their use on the lower eyelid they give support to quite an extent, and for that reason are to be preferred to the Thiersch graft in some cases. On the upper eyelid they are too heavy and should not be used except under special conditions.

THIERSCH GRAFTS.

The shaving or Thiersch graft which has most recently come into use is probably the easiest to handle. It seems to grow everywhere if a raw surface is prepared for its reception. While some would use it to the exclusion of all other forms of grafts, I think there are certain limitations which have to be taken into account.

In the preparation of the shaving graft I have found that the best plan was to have the skin perfectly dry, and with a dry razor remove the shaving, which should be placed on the surface previously prepared. Much better grafts can be cut in this way than when the salt solution is used, and very much less trouble is experienced in getting them into place. I have never had any trouble in making them grow if the surface was protected from the secretions of the eye, and could be kept quiet until adhesion took place.

As to shrinkage, we are told that none occurs after the graft has once healed. This depends entirely on the surface on which it is placed. When placed on a smooth surface which will not permanently contract, such as the fascia of a muscle, it will remain intact, as there is nothing in the graft itself to cause shrinkage. When placed on a surface in which there is some contractive tissue, as the lower eyelid after the removal of the outer muscles, the graft is very likely to entirely disappear. If placed on a granulating surface it will undergo the shrinkage of the underlying tissue. In several instances I used it to cover over a defect produced by destruction of part of a pedicle graft. The grafts would grow promptly, but later had completely disappeared from shrinkage of the underlying tissues.

On the upper lid they always served the purpose well. By cutting through the cicatricial tissue a smooth surface was obtained and the light graft was no obstacle to perfect movement. It is this which gives them preference over all other forms of grafts for the upper lids.

It has been demonstrated that the quicker the circulation of the graft is established after being put in position the less the subsequent shrinkage. For this reason the field on which the graft is placed should be smooth as possible and kept quiet so that no wrinkling will occur. To accomplish this I stitch the lids together when operating on the lower lid. I find the better plan to keep the upper lid in proper position is to put sutures through the edge of it and fasten to the cheek below with adhesive strips. This stretches the lid better, and gauze can be put along the edge to take up the secretion, which is frequently very profuse and troublesome, due to the previous exposure of the conjunctiva.

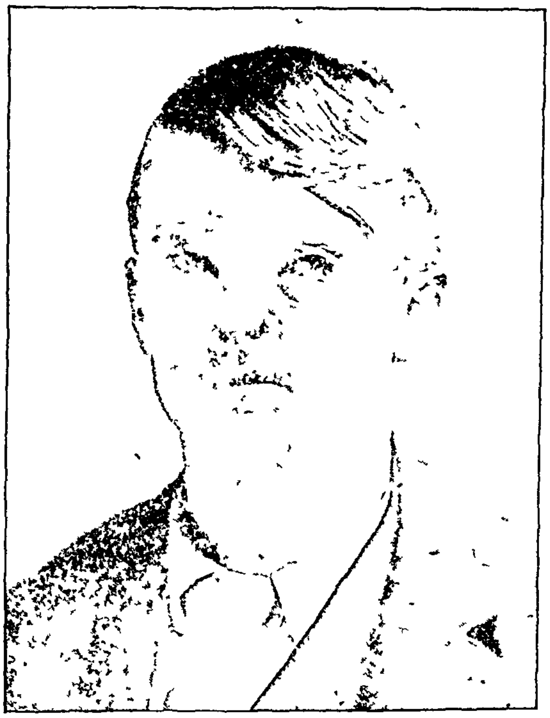

Fig 1.—Case 1. Before any operation was performed.

I have not mentioned the operation where the conjunctiva is also destroyed, as occurs with some tumors. My results have not been satisfactory, and I should prepare a lining to the graft before swinging into place, as recommended by Everbusch. The skin should be dissected up some days before the operation and the under side covered with a Thiersch graft. As soon as it is well healed the flap may be swung into place and we have a covered surface to bring against the eyeball. In one of the cases which I shall report I used Thiersch grafts to cover the inner side of the lower lid made by a large pedicle graft. They healed in place well, but as the patient did not return for the final operation it was not a complete success.

I have said nothing as to the manner of placing or anchoring the grafts. Dr. Hotz has devised a method of anchoring in which the grafts are divided so as to fasten the edge of the one on the eyelid along the border of the cartilage on the upper lid and to the periosteum of the orbital margin for the lower lid. The remainder of the defect may be filled in by Thiersch grafts with no fear of retraction, he says. My experience with this method is limited to one case, but the principle is a good one and I hope it will obviate some of the difficulties I have experienced.

REPORT OF CASES.

In order to illustrate better my conclusions I will report a few cases.

Case 1.—This is of the severe type of cicatricial ectropion of both upper and lower lids. A man, aged 25 years, came under my care in the fall of 1900. He was injured in an explosion six years before, being thrown face down into a coke fire, where he lay for some time until rescued. His face was severely burned, especially over the nose and eyelids, and some distance on to the scalp. He had received no treatment except that immediately after the injury.

There was complete ectropion of both lower lids, and the skin was tightly adherent over the nose, the left side of which was partly destroyed and the left side of the mouth was drawn up by the cicatrix. The forehead was deeply cicatrized and the upper lids turned out at their edge, being completely everted when he tried to close the eyes. The eyeballs were fortunately normal in spite of the exposure, as the corneæ were only protected when the eyes turned up. The cheeks were not so deeply cicatrized, but enough to prevent any growth of the whiskers. In December, 1900, I operated to restore the right lower lid, taking a large skin flap from the cheek with a pedicle placed high enough so the contraction would not pull the lid down. This was sewed in place after dissecting up what remained of the lower lid and stitching to the upper. The field for placing the graft at the nasal side was entirely cicatricial tissue devoid of blood vessels except a few large ones, the oozing from which it was almost impossible to control. The graft was about 4 inches long and 2 inches at the widest point. It all healed well except a small piece at the tip where a hemorrhage had taken place underneath it. The defect in the cheek was closed up by loosening the skin and drawing together.

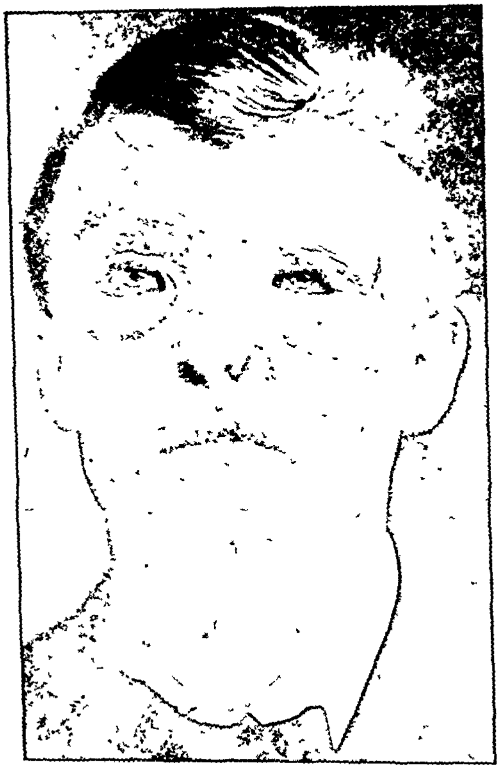

Fig. 2.—Case 1. Immediately following the operations.

In January, 1901, I operated on the left lower lid in the same manner, but the tip and part of the lower border necrosed. Three weeks later I filled in the defects where the graft had necrosed, and also on the cheek with Thiersch grafts. These grew in place, but those on the eyelid completely disappeared later. One month later I operated on the upper eyelids, filling in the defects with Thiersch grafts. The secretion from the conjunctiva was so profuse that I could not keep the wounds free from infection and part of the grafts would not grow. I tried Thiersch grafts again and a pedicle graft on the left, but they all necrosed. I dressed the wound with oxychlorin for some time and then applied some Thiersch grafts, which healed in place. In March the patient had to go home, although there was some parts not healed. I have not seen him since, but he writes me that he has continued in good condition, and recently sent me the last pictures, taken two years after his discharge. The grafts seem to have remained in about the condition they were when he left.

Case 2.—A man, aged 37 years, a carpenter by trade, entered the hospital in December, 1899, giving a history of having his face cut by a barber in June, 1895. It became inflamed and the wound discharged for six months. The redness and swelling gradually spread over the entire left side of the face and it was studded with clusters of pustules. He had been treated for years for lupus without result. Hearing that he had consulted Drs. Hyde and Montgomery, I took him to them for diagnosis. They pronounced it blastomycetic dermatitis, and under their direction he was entirely cured by the use of iodids in large doses and hot bichlorid of mercury lotion.

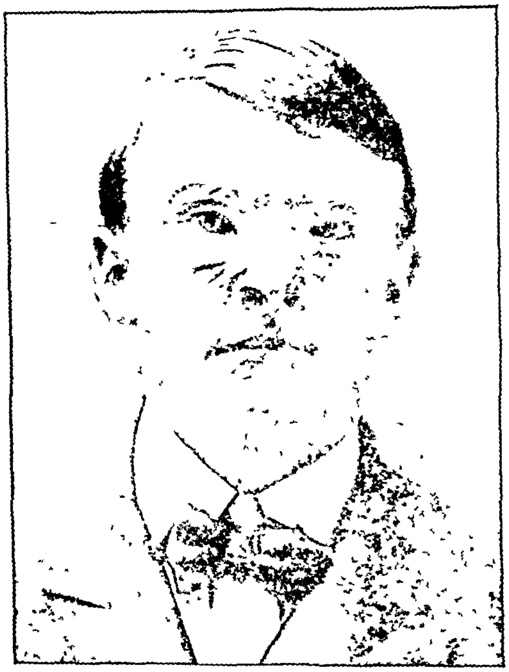

Fig. 3.—Case 1. Two years after the preceding picture.

He entered the hospital again in December, 1900, with the disease cured, but with a dense smooth cicatrix extending from below the left jaw up to the nose and including the left temple and upper eyelid. The outer canthus was pulled out greatly and the lower lid drawn down and out and much stretched. As there was no tissue to make a graft on the face, I took a pedicle graft from the temple where the cicatrix was not very deep and swung it around to form the lower eyelid. As the scar tissue on the face was very deep it was difficult to stop the hemorrhage and the tip of the graft was forced out by the hemorrhage and necrosed. A few days later I covered the place on the temple where the graft was removed and the bare places on the lid with Thiersch grafts. In January, 1901, I operated on the upper lid and covered it with Thiersch grafts. The lower lid still having a tendency to ectropion, I made an incision near its border and filled in with Thiersch grafts. I closed up the outer part of the canthus by means of a Fuchs tarsorrhaphy.

In spite of perfect healing the Thiersch grafts entirely disappeared on the lower lid. On the upper lid, where I was able to get a smooth surface, they gave a perfect result as well as on the temporal wound, where it is difficult to tell their location.

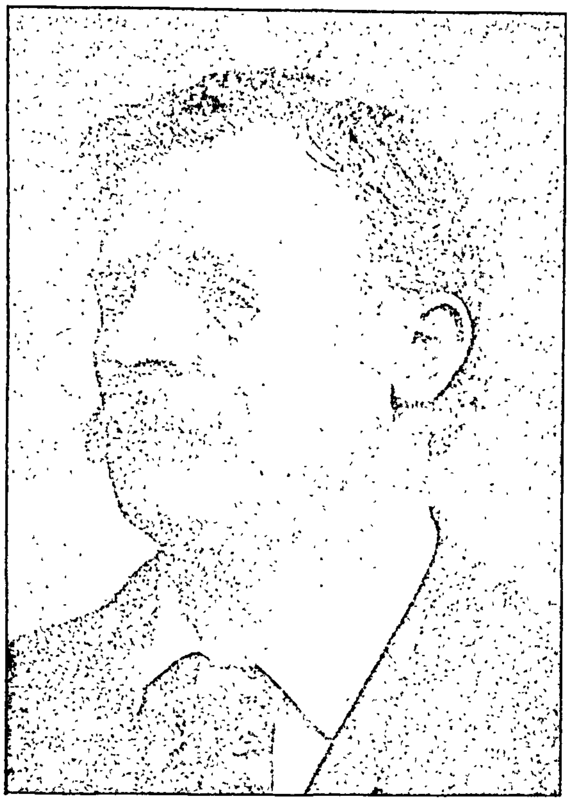

Fig. 4.—Case 2. Showing the dense scar and ectropion of the eyelids of the left eye.

In January, 1902, he returned with epiphora and partial ectropion of the lower lid, and I made an incision along its border and filled the cavity with a Wolfe graft prepared very thin. This has kept the lid in very good shape and the graft is about half the size it was when first placed a year ago. That it is impossible to tell the ultimate outcome in these cases is well shown by the fact that the contraction has apparently forced the large pedicle graft out toward the temple. This has allowed the lid to draw down some, but not enough, so I have thought best to operate again. The tension of the scar on the eyelids at the temporal end holding the outer canthus away from the eye is very troublesome, but I have not been able to devise any means to correct it.

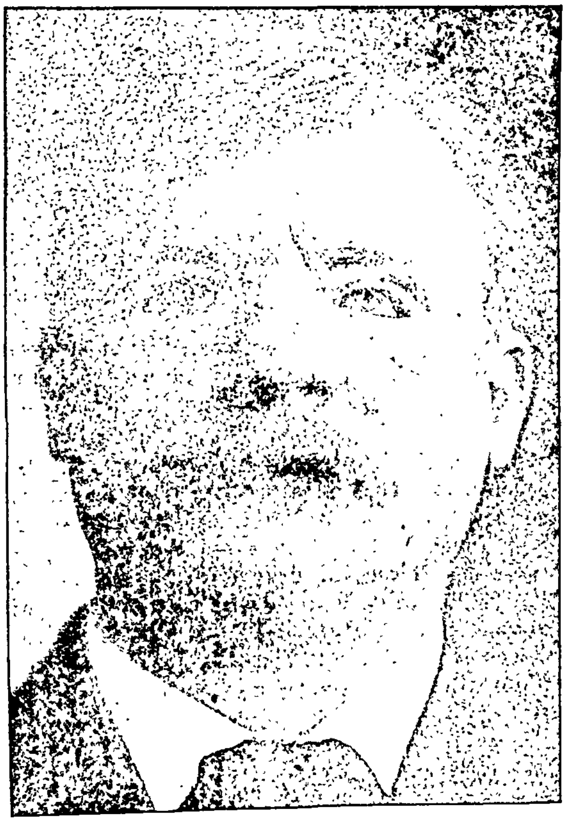

Fig. 5.—Case 2. About two years after the operations.

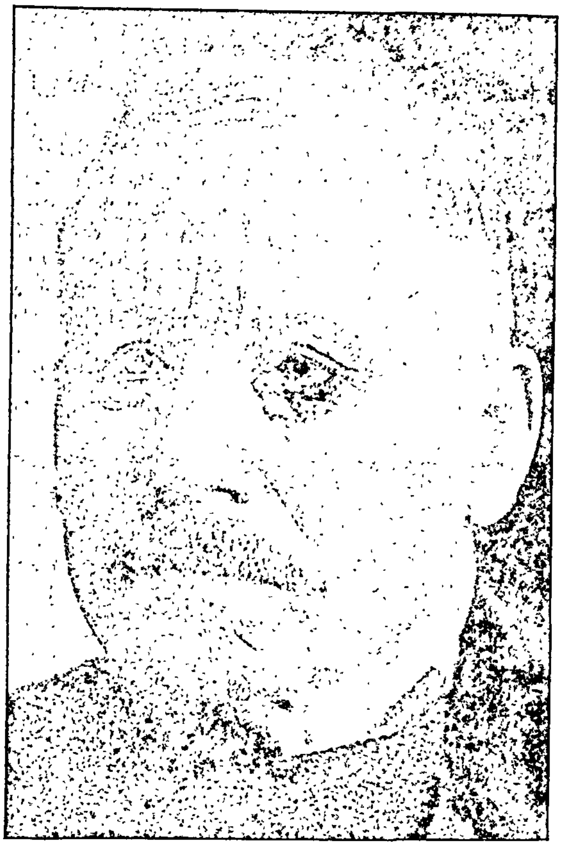

Fig. 6.—Case 3. Epithelioma of the lower lid.

Case 3.—Man, aged 65 years, well nourished, came under my care in October, 1901, at the Eye and Ear Infirmary. About one year previous he had noticed a wart-like growth on the left lower lid. This grew until at the time of entrance it involved the whole lower lid and extended a little beyond both outer and inner canthi. It was an epithelioma involving the whole thickness of the lid. I removed the growth and

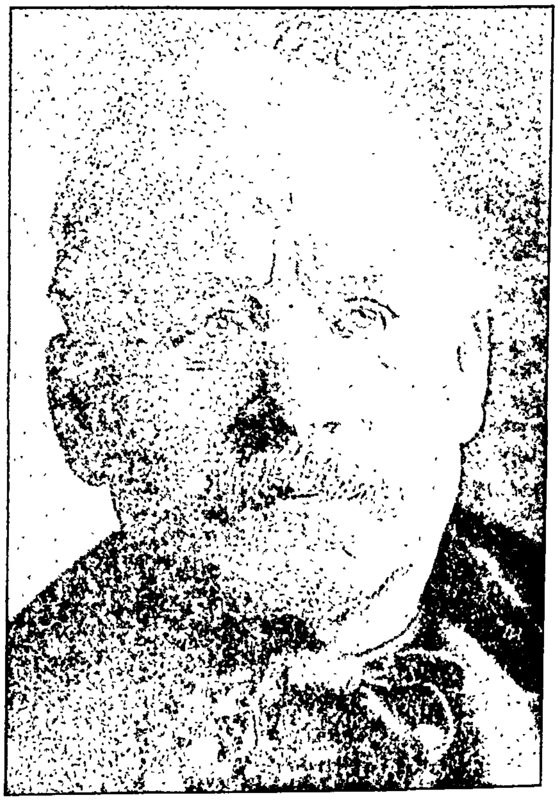

Fig. 7.—Case 3. About eighteen months after removal of tumor.

formed a lid by a large pedicle graft from below on the cheek. I covered the inner surface with Thiersch grafts, as well as the defect on the cheek. It all healed in place well, but at the nasal end the scar at the line of union contracted so there is a defect. I wished to operate again, but he is so well satisfied with the present condition he will not consent.

Case 4.—Mr. T. had an epithelioma of the right lower lid involving the lid margin for about the outer half and extending well over toward the nose. In October, 1900, I removed the growth, leaving a large defect, which I was persuaded to fill in with a Wolfe graft from the arm. The graft was about 2x3 inches before dissecting up. It fitted in place well and the immediate result was good, but by January, 1901, it had shrunken to about one-half inch long and one-eighth inch wide, and ectropion had taken place. I then dissected it out thoroughly and covered the surface with Thiersch grafts. The results were perfect at the time, but later the contraction had caused a marked ectropion. In December, 1901, I filled in the defect by a sliding graft from below, but it was not sufficient to support it well and the edge of the lid turned out. In June, 1902, I put in a Wolfe graft prepared very thin, and that has given sufficient support, so the eye is well protected. The reason for failure in the first place was probably that the graft was too thick, leaving too much tissue to shrink. The last graft was prepared as thin as possible.

SUMMARY.

In conclusion I will summarize my results as follows: For the upper lid Thiersch grafts should always be used, unless the whole thickness of the lid is destroyed.

In forming the lower lid, if there is adjacent skin available it should be used to form the lid and the resulting defect filled in with Thiersch grafts. When there is dense cicatricial tissue for the floor of the graft a pedicle graft is the only one which I have found satisfactory.

Should pedicle grafts not be available and the underlying tissue have proper vascularity, then either Wolfe or Thiersch grafts may be used, and my results have been best with a Wolfe graft prepared very thin.

DISCUSSION.

Dr. A. B. Hale, Chicago—In a severe burn from a gasoline explosion I followed the classical operation and made a flap; I want to warn against that method as a faulty operation. I did a Thiersch after that with a successful result. The vitality is too much impaired for a flap operation in these cases. A Thiersch gives better results.

Dr. Wm. H. Wilder, Chicago—As to the question whether we will employ a pedicle, or a Wolfe, or a Thiersch graft, I agree with Dr. Dodd in his conclusions. Where it is possible to get a pedicle graft from the forehead, or cheek, it should be used, for there is more assurance of its vitality being preserved than when the graft is taken from some more or less distant portion of the body. It is useless, of course, as Dr. Hale has said, to use a graft the vitality of which has been impaired or destroyed. The method used by Dr. Dodd of removing as much as possible of the fat from the subcutaneous tissue is a very good one. In my experience the Thiersch graft, where there is a contracting scar, will shrink. There is no one operation that will meet all cases of entropion. In some cases removal of a good part of the tarsus is a good procedure. One important step in the Hotz operation is the removal of the little bundle of muscle fibers just beneath the skin of the lower flap. This allows the lower flap to grow firmly to the anterior surface of the tarsus. Some operators prefer mucous membrane for marginal graft; I prefer something that will hold the lips of the wound apart, and accordingly use a skin graft taken from behind the ear.

Dr. C. W. Hawley, Chicago—The man who is in practice without a large clinic has few of these cases to operate on, so that my experience in skin grafting is limited. I had one case of a large fibrous tumor that occupied the region over the inner canthus. I employed a pedicle graft and the result was very good indeed. I have had more experience with operations on the eyeball with the Thiersch graft in relation to pterygia. I have tried both methods and, like Dr. Hale, want to say never use a mucous graft if it is possible to use a Thiersch. Your first operation may be a failure if you do not follow the advice given by Dr. Dodd, to cut them very thin. Within the last few months I saw an operation which was a failure simply for that reason; the graft was made very thick. At a second operation I suggested its being cut thin, and it was a success.

Dr. F. C. Todd, Minneapolis—Removal of the muscular tissue from under the skin as well as from the upper surface of the tarsal cartilage is essential toward securing firm union of the skin to its anchor, the cartilage, and is a feature of the operation on which Dr. Hotz lays great stress. Another point in securing a graft, which I learned from Dr. Wilder, is that of using an instrument he devised for grooving the cartilage, and which he showed several years ago at a meeting of this Section. He uses this instrument also for getting a graft from behind the ear or from the palm of the hand. There are two small blades that come together like a V and pick up a very neat graft, the width and length being governed by the pressure exerted in using the instrument. It is important to stop the hemorrhage with hot applications. for if we do not succeed in securing complete hemostasis the graft will not take, the blood preventing union. I now use in these cases adrenalin with excellent results. Of course, it is necessary that it should be aseptic. I do not think the use of adrenalin prevents uniting of the cut surfaces excepting when sepsis is introduced.

Dr. R. W. Miller, Los Angeles, Cal.—Controlling the hemorrhage is a very important point, and I have frequently used adrenalin; but it must be borne in mind that if it be freely used, unless a very firm after-dressing is applied, there is likely to occur secondary hemorrhage. Another good method of controlling the hemorrhage is to have an assistant compress the temperal artery.

Dr. Dodd—In regard to the point of Dr. Hale, my cases of Thiersch graft on the lower lid have been absolute failures. Dr. Hotz advocates the Thiersch graft as the only thing to use, and he says the reason I have failed with it is that I have not anchored my grafts properly to prevent contraction. I have only used his method in one case, and until I have had further experience it is impossible for me to judge of that point. I have never had any trouble with the Thiersch graft on the upper lid.

TRAUMATIC LESIONS OF THE OCULAR ADNEXA;

WITH REPORT OF A CASE OF CONTUSED WOUND OF THE EYEBROW, RESULTING IN COMPLETE MONOCULAR BLINDNESS UNACCOMPANIED BY OPHTHALMOSCOPIC CHANGES.*

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Traumatic lesions of the ocular adnexa would include injuries of the eyebrow, eyelids, conjunctiva, orbital walls and soft parts of the orbit. This paper will deal more particularly with injuries of the eyebrows, orbital walls and soft parts of the orbit, as illustrated by the cases reported.

Wounds of the superciliary region are of frequent occurrence, and when superficial and limited to the soft parts, are not usually serious, but they may be followed by disastrous consequences, and even by fatal results should they affect or extend to the underlying bones.

If bone tissue is involved, osteitis, necrosis and fistulas may result. Suppuration of the orbital connective tissue is in all cases a serious complication of contusion of the superciliary region. Injury of the supraorbital nerve may produce craniofacial neuralgia, muscular twitchings in the facial region, trophic changes in the eye, and finally give rise to visual disturbances that are characterized particularly by photophobia and accommodative asthenopia. This is particularly the case if the nerve or any of its branches is imprisoned in an adherent cicatrix.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

As a rule, one or more of the walls of the orbit are involved in an injury to the orbital edge, but that the violence of the traumatism is undoubtedly neutralized, in part, by the prominence and the resistance of the edge of the cavity, is shown by Berlin's statistics, in which, out of 19 cases of simultaneous fractures of the edge of the orbit and of the vault, there were 16 recoveries, while 52 cases of fracture limited to the superior wall were followed by 41 deaths.

Again, direct fracture of the superior wall of the orbit is more liable to involve the optic canal. The optic nerve and its sheath are often violently torn and compressed, resulting in a retrobulbar neuritis with loss of vision, or a secondary form of compression from callosities or periostitis may take place followed by the same results.

Callan has recently reported nine cases of injury to the orbital walls, resulting in immediate unilateral blindness, in which it was believed that the line of fracture ran through the optic foramen.

Von Hölder has published the results of his examination of the bones in 124 cases of fracture of the skull. Among these there were 86 of fractures of the bone, and in 79 of these the fracture involved the roof of the orbit. In 63 cases there was a fissure or fracture running through the optic foramen, always through its upper wall, sometimes also through the inner wall. In 42 cases there was hemorrhage into the sheath of the nerve, and he never found blood in the optic sheath unless the bony canal was fractured. The hemorrhage was sometimes found in both optic sheaths.

As regards injuries to the soft parts of the orbit, it is a well-known fact that as a result of the shape and the free mobility of the eyeball, a wounding object may pass around its fibrous sheath and produce an injury of the surrounding soft parts of the orbit only. The importance of such a form of traumatism depends above all on the cleanliness of the penetrating body. If the offending instrument or foreign body has not been freed from septic material while passing through the skin, the conjunctiva, and the orbital septum, it may act as the cause of a cellulitis, endangering not only the vision, but also the life of the patient. Section of the ophthalmic vessels, rupture of the ocular muscles, injuries to the sensory and the motor nerves, and the presence of foreign bodies are among the most interesting lesions of those parts.

The ocular muscles are sometimes injured without any accompanying luxation of the eyeball; but these accidents are rather rare, not more than twelve or fifteen having been reported. The internal rectus is the one most frequently injured.

In these cases the loss of continuity of the muscular fibers has been both partial and complete. The prognosis, so far as the muscle is concerned, is generally favorable, for if a functional loss of power result it may be restored by operative interference.

Actual division of the motor nerves is rare. Berlin could find none such reported in literature. He himself reports two cases, which can not be explained in any other way than by division of the nerve fibers supplying the muscles.

In reporting the following case of a contused wound of the eyebrow, resulting in complete monocular blindness without ophthalmic changes, I do not report it as a rare injury, but because it serves to give a clinical picture of some of the main points in this paper.

Case 1.—Mr. F. Van A., age 34, was caught by a belt of a rock crusher. His head was badly bruised and he sustained a severe cut over the right eyebrow in a transverse direction from the internal angular process of the frontal bone to the external angular process, and extending to the bone; injuring the periosteum at one point and passing directly across the point of exit of the supraorbital nerve.

The frontal sinus was not involved. The injury was followed by total loss of vision in the right eye. No ophthalmoscopic changes at this time. After the wound healed the patient suffered from craniofacial neuralgia as the result of the supraorbital nerve being imprisoned in the adherent cicatrix. Within a month's time the vision returned until the patient could see large objects about the room, but there was no further improvement. No ophthalmoscopic changes. In this case there doubtless was an indirect fracture of the optic canal, resulting in an injury of the optic nerve, which was followed by a retrobulbar neuritis.

The second case illustrates the result of an injury to the soft parts, and is rare, in that there was either rupture of an ocular muscle, detachment of its tendon from its insertion into the sclera, or an injury to a motor nerve, complicated with an injury to the terminal branches of the superior maxillary nerve with loss of sensation of the parts supplied by them.

Case 2.—J. A. S. presented himself Jan. 19, 1901, at my office for examination, giving the following history: Dec. 31, 1900, he was struck in the right eye with the handle of a closed pocket knife held in the fist, the knife striking the lower margin of the orbit and the globe of the eye at its outer and lower quadrant. Swelling followed, and patient suffered considerable pain. There was loss of sensation over the region of the face supplied by the terminal branches of the inferior maxillary nerve; there was also loss of sensation in the gums of the upper jaw of the same side.

Patient placed himself under the care of a general practitioner, who gave him a simple eye wash. An examination of the eye revealed considerable lachrymation and photophobia, and some congestion of the eyeball at the point of injury.

It appeared as if the conjunctiva and Tenon's capsule had been torn by the blow. There was diplopia and the eye refused to turn out, indicating that there had either been an injury of the muscular tissue of the inferior oblique and external rectus, or a complete traumatic paralysis. There was also marked ptosis. V.=20/30. Fundus normal. At this time sensation had returned to the gums of the upper jaw, but there was still complete anesthesia of that region of the face supplied by the terminal branches of the inferior maxillary nerve. Unfortunately the case passed from observation and the permanent nature of the injuries was never ascertained.

The third and last case that I desire to report is a type of the more serious wounds that may occur in this region, and is interesting because of the extent of the injury, the complications, and the fact that there was no serious brain involvement.

Case 3.—P. J., male, aged about 25 years, was shot in the head. Bullet entered ala of the nose on the right side, coursing upward and to the right, fracturing the right nasal bone. It then passed through the posterior half of the eyeball and lodged in the deep tissues of the orbit. There was great swelling and ecchymosis. An enucleation was made and the bullet extracted. Patient was in a semi-comatose condition at the time of the operation and remained so for twenty-four hours following. An interesting feature of this case was that it was complicated by infection. An abscess formed, the pus burrowing through the upper lid, leaving a good-sized fistula. Healing took place soon after the formation of this opening, and the patient made a good recovery.

The main conclusions to be reached in a study of traumatic injuries of the ocular adnexa are: first, the necessity for a guarded prognosis in all cases and secondly, the value of asepsis and antisepsis in the treatment of all wounds located in this region.

DISCUSSION.

Dr. Casey A. Wood, Chicago—I have had a number of cases of incised wounds of the lids, involving their margins. We have an incised, or more frequently an incised and lacerated wound of the lids, penetrating the whole thickness of the lid, and generally we do not see these cases for some days or weeks after the injury. Some one has, perhaps, done his best to bring the wound margins together, and generally not very successfully, partly because of the irregularity of the edges and partly because of the sloughing due to infection or to the original injury. These have always been to me cases of great interest. After trimming the edges of the wound I have been in the habit of passing "anchor" sutures involving all the tissues of the lid, to keep the wound edges in close apposition (illustrating on board) on everting the lid. Then the conjunctiva down to the lid margin is sutured with a continuous thread, a separate suture being carried over the intramarginal space to bring the lid edge tissues close together. The skin is treated in like manner, after which I remove the deep sutures which only served a temporary purpose. This is the only way in which I have been able to accomplish the results we desire in these injuries, that appear so simple and yet require, if we desire good cosmetic results, rather careful treatment. As to gunshot wounds of the orbit, I have had two cases where the optic nerve was not injured, and yet optic atrophy was the result. Notwithstanding the "vibration" theory of some observers, I have not been able to satisfy myself as to the cause of this untoward result. Another matter worth considering is the "concussion" cataract that may follow almost any injury to the orbit, or to the head in the region of the eye. The old idea was that the concussion of the fibers of the lens brought about these secondary changes. I am inclined to think that it is really the profound though transient interference with ciliary circulation that brings about these cases of concussion cataract. Some years ago I published a number of these cases and have had several since. I am curious to know what the members of this Section think about the etiology.

Dr. Wm. C. Posey, Philadelphia—Three cases in which there was complete monocular blindness following an injury to the head, but in which vision was after a time fully restored, were reported by Nettleship and one by myself, before the College of Physicians of Philadelphia in 1899. In these cases the blindness is not immediate, but comes on some hours afterward. The ophthalmoscope shows evidence of compression of the fibers of the optic nerve, and from the deep-seated pain on motion of the eyeball, and a throbbing sensation which is occasioned by blowing the nose, involvement of the sphenoidal cells is indicated. These cases are of interest from a prognostic standpoint, for they show us that when blindness is not immediate after a head injury, vision may be regained, and every therapeutic effort should be made, therefore, to accomplish this result.

Dr. Harold Gifford, Omaha—Prior to this case of Dr. Posey's I was prepared to give my patients with blindness after a trauma of the orbital wall an unfavorable prognosis. I had never seen any of them recover, and had never seen the history of any recovery. Dr. Posey's case seemed to confirm so strongly the words of Panas: "The words 'never' and 'always' have no place in medicine." As to Dr. Wood's method, I have been afraid to leave knots on the under surface of the lid. In Königsberg, where similar operations are very common, the reports speak of inspecting the cornea from time to time "to see if the knots are causing ulceration of the cornea." In doing this kind of an operation I have been impressed with the importance of bringing the conjunctival edges into close apposition, and have passed the needle through the lid from its outer surface, then after completing a continuous suture of the conjunctiva have passed the needle clear through the lid again so as to leave both knots on the outer surface of the lid. The tension sutures which Dr. Wood says he takes out before bandaging the eye, I leave in. They are important in relieving the strain of the orbicularis on the other sutures.

Dr. John O. McReynolds, Dallas, Texas—My experience has been that in paralyses produced by injury to the nerves that supply the muscles of the eye the normal function of the muscles has returned. Further, if the blindness has been caused by hemorrhage, when that is absorbed the vision returns; but if there is fracture of the foramen with rupture of the nerve, rapid, white atrophy ensues with no return of vision.

Dr. Oscar Dodd, Chicago—I remember well two gunshot wounds of the orbit. The son of a physician had a small shot pass through the upper lid and produce complete blindness, probably by striking the optic nerve. There was no change in the nerve, however, when I examined him two weeks after the injury. The other case had a bullet from a revolver held against the temple pass through the orbit, injuring the optic nerve. In this case there was atrophy of the nerve. As to those wounds of the upper lid, mentioned by Dr. Wood, I have often found the retraction very difficult to prevent. In some cases it produces considerable deformity. I always sew the conjunctiva and skin separate, and, when possible, I trim the edges so they will overlap and the lines of union will not be opposite each other. This helps to prevent the retraction.

Dr. Allen Greenwood, Boston—Dr. McReynold's statement is the common experience, I think, as the optic nerve passes through so small a foramen that any fracture there will crush it. In the other nerves the injury is not from crushing, but rather from pressure of exudates and hemorrhages. I had a case recently of such an injury, where a small boy received a blow on the infraorbital ridge with apparently no injury to the brain. In a week, when the bandage was removed from the eye there was blindness with complete paralysis of the external rectus, probably due to fracture near the base. The paralysis of the external rectus disappeared in a week's time, while the injury to the optic nerve resulted in complete atrophy. The optic nerve was distinctly atrophic a week after the injury.

Dr. Edw. Jackson, Denver—I think probably the important point in reference to the prognosis in these injuries involving blindness is the time in which the blindness supervenes. If it is a direct injury to the nerve the blindness will be immediate, and there will probably be no recovery whatever. But in a large number of them the blindness is not immediately discovered; the patient is stunned; or in other cases there is a good deal of effusion and the eyelids are closed for some days. In a case where there was a clear history of seeing at all, certain light perception, after the injury, I think the prognosis would be at least a chance of some recovery of sight. But if there has been no vision in the eye after such injury, the probabilities would be strongly against any recovery of sight. All cases of direct injury to the optic nerve that caused serious impairment of vision that I have known of have shown no evidences of sight after the injury at all. I recall one case of gunshot injury where the patient was not much shocked and the first thing he noticed was that the eye was blind. The optic nerve had been cut by the shot. I think the point to determine the prognosis would be whether or not the blindness was immediate.

Dr. Albert E. Bulson, Jr., Fort Wayne, Ind.—We should not lose sight of the fact that many of these cases are caused by hemorrhage or effusion, and in such cases the prognosis is more favorable. If we put our patients at absolute rest and begin eliminative treatment we will sometimes secure results that at first may seem impossible. I had one such experience in a case where there resulted absorption of the effusion around the optic nerve which had produced total blindness. The patient secured 20/50 vision following treatment of a condition that seemed to offer little hope of favorable results. Our prognosis should be guarded.

Dr. Leartus Connor, Detroit—It strikes me that about this topic there are as many sides as to a sphere. I recall two cases of gunshot wound of the orbit that were never followed by any ill result. I recall a recent case of a woman in middle life, who, when a child of 6, fell against a door and hit her left eye at the outer brow. There was no scar to indicate the lesion, but from that time the eye turned outward and she had double and imperfect vision. When I saw her she had a choroidal atrophy with some optic atrophy. I presume at that time there was probably hemorrhage in the fundus of the eye. I never feel able to say at the time of injury just what result may be expected.

Dr. William Zentmayer, Philadelphia—I wish to call attention to the frequency with which we find central choroiditis, or perhaps in some cases holes at the macula, in these cases. In some instances it may be the primary trouble and the optic change is secondary.

Dr. Samuel L. Ledbetter, Birmingham, Ala.—About two years ago I had a patient who had been struck in the eye by the breech pin of a gun and the ball destroyed. It gave no trouble other than the loss of sight. The patient came to me saying that lately he found there was something in the outer angle of the eye that gave him trouble. I found a piece of a glass bottle ⅝ of an inch across, and supposed I had gotten that which caused all the trouble. He said that about three months before he had thrown at a dog and struck a bottle and that a fragment flew back and struck him in the eye. Ten days later he came back with a suppurating sinus. I cut down into the tissues and found a metallic substance below the surface, which was removed with difficulty. It was the breech pin of the gun, measuring 1½ inches in length and ⅞ inch in diameter and weighed 1½ ounces. It had been there three years.

Dr. John E. Weeks, New York—I would like to mention a few cases that show the extensive injury to the orbit that can be sustained without affecting the eyeball. The first patient attempted to commit suicide, shooting himself in the temple. The ball passed through both orbits without in any way interfering with vision. Another case somewhat remarkable was that of a young man who was fencing. The point of the foil struck him just below the margin of the lid, in the left eye; the only wound was a tearing of the skin, which was raised for perhaps the distance of 1 cm. Very shortly after this occurred there was paralysis of the external rectus. This lasted for six weeks, disappearing gradually. Another case was one in which a young man in falling caught on a meat hook which entered the orbit, caught up the internal rectus and tore it across without injuring the eyeball, but lacerating the lid somewhat. There was, of course, a marked divergence, but by catching up the tissue of Tenon's capsule together with the torn muscle and suturing it to the eyeball the diplopia was corrected.

THE PRODUCTION AND NATURE OF STREPTOCOLYSIN.*

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CHICAGO.

(From the Memorial Institute for Infectious Diseases.)

In 1897 Bordet[1] drew attention to the fact that there generally is more or less hemolysis in the blood of a rabbit which has died of streptococcus infection. This hemolysis is not constantly observed, but was present, for instance, in 37 of 40 rabbits dying of streptococcus infection, in which it was looked for in this laboratory during the last eight months. This phenomenon seems to be unique in the field of bacteriology, although there are several other organisms, such as the *B. tetanus*,[2] *B. pyocyaneus*,[3] *Staphylococcus pyogenes*,[4] *B. typhosus*,[5] *M. tetragonus*,[6] *B. megatherium*,[7] and others,[8] the filtered cultures of which are capable of hemolysing red corpuscles of various animals. These organisms, however, do not produce hemolysis in the body of an animal which has been injected with the young cultures, as is the case with the streptococcus. Todd[7] has found, however, that filtrates from an old culture of *B. megatherium* produce hemoglobinuria in a guinea-pig, when injected subcutaneously. If larger quantities are injected hemoglobinuria, hematuria and finally death of the animal are produced. Kraus and Ludwig[9] found marked anemia in rabbits after the subcutaneous injection of old cultures of *Staphylococcus pyogenes aureus*, or their filtrates.

Bordet's observation soon led to the attempt to produce this hemolysin in a test tube, but the earlier experiments were uniformly unsuccessful. It was found that filtered cultures, in all ordinary media, possessed no hemolytic properties, regardless of how strongly that same streptococcus produced hemolysis when injected into a rabbit. Recently, however, Besredka[10] succeeded in getting filtrates that hemolysed not only rabbit corpuscles, but also those of many other animals, by growing a virulent streptococcus in heated rabbit serum and passing through a Chamberland filter. Besredka made a close study of this streptocolysin, but none of his experiments throw much light on the nature of this substance. In consideration of this fact it was suggested to me by Professor Hektoen to repeat the experiments, with the view of verifying Besredka's findings, and to carry the work further in an attempt to throw some light on the nature of streptocolysin.

The streptococcus used in these experiments was obtained from a retroperitoneal abscess in a guinea-pig, which had been injected intraperitoneally with a fungus. It forms rather short chains, renders ascites-bouillon uniformly turbid and acidifies milk in 24 hours, but does not coagulate it. When it was isolated 5 c.c. of a 48-hour culture killed a full-grown rabbit in 4 days. The virulence was increased, by passage through 30 rabbits, until 0.0003 c.c. of a 24-hour culture in ascites-bouillon kills a rabbit in less than 20 hours.

Streptocolysin was prepared in practically the same manner as described by Besredka. The best results were obtained with filtrates prepared as follows: Mix 1 part of human serum with 2 parts of rabbit serum, heat the mixture to 56 C. for 30 minutes, inoculate this with a young virulent culture of streptococci, incubate for 20 to 22 hours, dilute with an equal volume of physiologic salt solution,[11] and pass through a porcelain filter.

Besredka recommends that the inoculation be made directly from the heart's blood of a rabbit which has just died of streptococcus infection and in which hemolysis has taken place. This was not found necessary. The dilution with salt solution is recommended to facilitate filtration of the serum. Great care must be observed in the selection of a filter. While the serum must pass through perfectly clear and free from streptococci, too fine a filter must not be used, as it removes from the

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* This work was carried out under a grant from the American Medical Association.

[1] Annales de l'Institut Pasteur, 1897, xi, 177.

[2] Ehrlich: Berlin. klin. Wochenschr., 1898, xxxv, 273; Madsen, Zeitschr. f. Hyg. u. Infect., 1899, xxxii, 214.

[3] Bulloch and Hunter: Centralbl. f. Bakt., 1900, xxviii, 865; Weingeroff, Ibid., 1901, xxix, 777.

[4] Neisser and Wechsberg: Zeitschr. f. Hyg. u. Infect., 1901, xxxvi, 299.

[5] Levy u. Prosper Levy: Centralbl. f. Bakt., 1901, xxx, 405.

[6] Lubenau: Ibid., 1901, xxx, 356.

[7] Todd: Lancet, 1901, vol. ii, 1663.

[8] Kraus u. Clairmont: Wien. klin. Wochenschr., 1900, xiii, 49.

[9] Wien. klin. Wochenschr., 1902, xv, 382.

[10] Annales de l'Institut Pasteur, 1901, xv, 880.

[11] 0.75 per cent. salt solution was used in these experiments.

serum its hemolytic property. If the serum loses most of its color while passing through the filter it is likely to be worthless.

Filtrates obtained in this manner were proven to be sterile by inoculating a tube of ascites-bouillon with 1 c.c. of filtrate and incubating for 48 hours. No growths were obtained. They hemolyse both washed and unwashed corpuscles of man, rabbit, dog, goat, sheep, beef, hog, guinea-pig, chicken and horse—in fact, all that have been tried. The corpuscles of man and rabbit are least resistant. One drop of a thick suspension of these corpuscles, washed, is completely hemolysed by 1 c.c. of streptocolysin in 1½ hours, if kept in the incubator. Those of chicken, beef and horse are somewhat more resistant than the others, but their dissolution is considerably hastened by washing them five times in physiologic salt solution before they are subjected to the influence of streptocolysin.

The fact that these corpuscles are hemolysed more rapidly after being washed at once gave rise to the suspicion that there is something in the sera of these animals—antihemolysin—which protects the corpuscles against streptocolysin. That this supposition is correct is proven by the following experiment: Take four small test-tubes, (a), (b), (c) and (d), and introduce 1 c.c. of streptocolysin into each. To (a) add 1 c.c. of normal chicken serum and in one-half hour add one drop of normal chicken blood. To (b) add 1 c.c. of physiologic salt solution and one drop of a suspension of washed chicken corpuscles, in physiologic salt solution. To (c) add 1 c.c. of chicken serum which has been heated to 55 C. for one-half hour, and in one-half hour add 1 drop of a suspension of washed rabbit corpuscles. To (d) add 1 c.c. of salt solution and 1 drop of a suspension of washed rabbit corpuscles. Transfer all tubes to the incubator and examine in five hours. There is complete hemolysis in (d) and (b), but no hemolysis in (a) and (c). No hemolysis is observed in (a) and (c) in eight hours, but there sometimes is a trace in 24 hours. The sera of beef and horse also protect the corpuscles against streptocolysin, but not so completely as does chicken serum.

Many other substances, as solutions of various salts and colloidal solutions of gold and platinum, were tested for antihemolytic properties, but with very little success. A 1 per cent. solution of formaldehyd in physiologic salt solution retards hemolysis for 5 to 6 hours if it is mixed with streptocolysin in equal proportions before the corpuscles are added. Treating the corpuscles with such a solution for 1 hour, washing and then adding them to a tube of streptocolysin does not interfere with their hemolysis.

The filtered cultures in heated rabbit serum of two non-virulent streptococci were tested for hemolytic properties, but these filtrates produced only a trace of hemolysis in 24 hours.

Other sera than rabbit serum may be used as culture media in the preparation of streptocolysin, but the substances produced in these sera are not so active as those produced in rabbit serum. In studying the streptocolysins produced in different sera Besredka came to the conclusion that they are not alike. He found, for instance, that streptocolysin produced in human serum hemolyses corpuscles of man, rabbit, guinea-pig, goat and sheep, but not those of chicken and goose. That produced in goat serum hemolyses corpuscles of man, rabbit and guinea-pig, but not those of goat, sheep, chicken and goose. He concluded from these findings that streptocolysin, and hence also the products of other bacteria, may be different if produced in different media.

These experiments were carefully repeated, but Besredka's findings could not be verified. It was found that streptocolysin produced in goat serum hemolyses corpuscles of goat, sheep and chicken just as does that produced in human serum or in rabbit serum. The latter, however, hemolyses in a much shorter time than do either of the other two.

Many bacterial toxins are destroyed by heating to 56 C. for one-half hour, but that is not the case with streptocolysin. It may be heated to 60 C. for one-half hour without being inactivated. If heated to 65 C. for one-half hour its value is greatly impaired, but it is completely inactivated only by heating to 70 C. for 2 hours. If once inactivated, it can not be reactivated by the addition of complement. It is inactivated by leaving in the incubator at 37 C. for 5 days. If kept at room temperature it is still hemolytic at the end of two weeks, and if preserved in an ice-chest it remains active for more than a month. Freezing for a short time does not destroy it.

It is non-dialysable. Five c.c. of the filtrate were kept in a dialyser for three days, but when taken out it hemolysed as rapidly as it did before. Digestion with pepsin for 14 hours at 39 C. destroys it.

Turning to the consideration of the nature of streptocolysin, we may compare its behavior with that of other hemolysins, the nature of which has already been determined. Is it an alkali, which was recently shown by Jordan[12] to be the nature of pyocyanolysin? This question is answered readily in the negative because streptocolysin is faintly acid to phenolphthalein (0.3 per cent.), and it is destroyed by heating to 70 C. for two hours.

Is it one of those complex substances depending on the combined action of an intermediary body and complement, which was shown[13] to be the constitution of many natural hemolysins as well as of those found in the sera of animals which have been repeatedly injected with the red cells of an animal of a different species? This question also may be answered in the negative from the following considerations:

(a) Complement, as it is ordinarily known, is destroyed by a temperature of 56 C. in one-half hour. Streptocolysin may be heated to 65 C. for one-half hour without being destroyed, and when it is inactivated by a still higher temperature it can not be reactivated by the addition of complement. Hence we may conclude that we are not dealing here with complement as it is ordinarily found.

(b) In the case of natural hemolysins and those produced by immunization, the intermediary body alone may be bound to the corpuscles and thus removed from the serum. This is done by keeping a mixture of corpuscles and serum at a temperature near 0 C. for 30 minutes or more, and then centrifugalizing and drawing off the clear serum. If now the corpuscles are washed in a cold salt solution and incubated no hemolysis takes place. The addition of complement to these corpuscles brings about hemolysis. If, on the other hand, fresh corpuscles are added to immune serum which has been treated in the cold with an excess of corpuscles no hemolysis is observed.

The behavior of streptocolysin is quite different from this, as is shown by the following experiments:

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[12] Trans. Chicago Path. Society, 1902, v, 175.

[13] Ehrlich and Morgenroth: Berlin. klin. Wochenschr., 1899, xxxvi, 6.

1. Mix one-half c.c. of a thick suspension of washed rabbit corpuscles with 2 c.c. of streptocolysin and keep the mixture below 3 C. for 5 hours. No hemolysis is observed. Centrifugalize in a cold place, draw off the clear serum and wash the corpuscles five times in salt solution. Now suspend them in 2 c.c. of salt solution and incubate. No hemolysis takes place, even after the addition of complement. Add fresh corpuscles to streptocolysin which has been treated in the cold with an excess of corpuscles, and hemolysis is produced by incubating for 2 hours.

2. Make a similar mixture of streptocolysin and corpuscles as was used in experiment 1 and keep it at a temperature of 6 C. for 3 hours. No hemolysis is observed. Centrifugalize in a cold place, draw off the clear serum and wash the corpuscles five times in cold salt solution. No hemolysis takes place during the washing if the temperature is kept below 6 C. Suspend the corpuscles in salt solution and incubate for 2 hours. Marked hemolysis will now be observed.

Streptocolysin, therefore, is not similar to the immune hemolysins; it is not a substance depending on the combined action of an intermediary body and complement.

I have carried the study farther in order to determine whether or not streptocolysin is similar to diphtheria toxin, tetanolysin and staphylolysin. These substances, as was shown by Ehrlich,[14] Madsen,[15] and Neisser and Wechsberg,[16] respectively, are composed of a complex molecule in which are linked together a haptophore and a toxophore group. By means of the haptophore group, which may be active at a low temperature, the toxin attaches itself to the cell, and not till then can the toxophore group exert its destructive effect over the cell, and then only at a temperature approaching that of body heat.

This, as we have just seen, is precisely the behavior of streptocolysin. At a temperature of 6 C. it may be bound to the red corpuscles so firmly that it can not be removed from them by repeated washings, but hemolysis takes place only after the temperature is raised considerably above this point—best at 37 C.

The existence of a haptophore and a toxophore group is still more strongly indicated by the following experiment: Take 2 c.c. of streptocolysin, add one-half c.c. of a thick suspension of washed rabbit corpuscles and keep the mixture at the temperature of 6 C. for 3 hours. No hemolysis takes place. Centrifugalize in a cold place, draw off the clear fluid and wash the corpuscles five times in cold physiologic salt solution. Now divide them into 3 equal portions, (a), (b) and (c). To (a) add 2c.c. of salt solution; to (b) add 1 c.c. of heated chicken serum and 1 c.c. of salt solution and to (c) add 2 c.c. of salt solution to which has been added 1 drop of a 5 per cent. solution of zinc chlorid. Incubate the tubes and observe in 5 to 6 hours. There is marked hemolysis in (a) and (b), but no trace of hemolysis in (c).

We have already seen that heated chicken serum is antihemolytic, if it is added to an equal volume of streptocolysin, and corpuscles added later. But this serum is no longer capable of preventing hemolysis if added to corpuscles which have been treated with streptocolysin at 6 C. for 3 hours and then thoroughly washed, although hemolysis may still be prevented at this stage by the addition of a trace of zinc chlorid or zinc sulphate. It seems now that this peculiar behavior of streptocolysin is best explained by the assumption that we are dealing here with a haptophore and a toxophore group which are linked together in one molecule. The chicken serum, therefore, either destroys the haptophore group, or something in it combines with this group and saturates it, so that the streptocolysin can not become bound to the corpuscles. The toxophore group remains unaffected. According to the theory, this should prevent hemolysis, and the experiments have shown this to be the case. Zinc chlorid, on the other hand, is capable of arresting hemolysis after the streptocolysin has been bound to the corpuscles, and this effect seems to be due to its action on the toxophore group. It must be added that corpuscles which have been treated for 1 hour with a weak solution of zinc chlorid and subsequently washed, are readily hemolysed if mixed with streptocolysin and incubated.

Several attempts have been made to immunize rabbits against streptocolysin, in the hope of producing antistreptocolysin in their sera, but, so far, these experiments have been unsuccessful. All of the rabbits died after receiving from 2 to 5 injections of 0.5 c.c. each. This work is being continued, and will be reported more fully at a later date.

The toxicity of these filtrates was further determined by injecting seven rabbits with varying quantities. Six of these died, while one receiving 2 c.c. intravenously is alive four weeks after the injection. Cultures made from the heart blood, liver and spleen of these animals were sterile. This work also is being continued, and will be reported in a subsequent paper.

CONCLUSIONS.

Virulent streptococci, when grown in heated rabbit serum (and other sera), produce a hemolysin which destroys the red corpuscles of many animals.

This hemolysin is an organic substance which is destroyed by heating to 70 C. for two hours.

It gradually deteriorates if kept at room temperature, but may be preserved in the ice chest for a much longer time.

In the incubator it deteriorates very rapidly.

It is destroyed by peptic digestion.

It is non-dialysable.

It is composed of a haptophore and a toxophore group, which are firmly bound together. The haptophore group may be neutralized with chicken serum and the toxophore group is destroyed by zinc chlorid.

The sera of some animals contain antistreptocolysin.

A weak solution of formaldehyd has antihemolytic properties.

The filtered cultures of a virulent streptococcus, in heated serum, are toxic for rabbits.

I desire to take this opportunity to thank Professor Hektoen for suggestions and encouragement.

In the Medical Society.—These rivalries, dissensions, jealousies and controversies can be softened, and professional friendships be formed and cemented; there you can find opportunities for pleasant, social intercourse with worthy men. There you can also silently measure the height and depth of your medical contemporaries, and see the difference between the serious and the superficial thinker, the convincing and the faulty logician, the judicious and the injudicious, the alert and the stupid, intellectual giants and mental dwarfs; there you can also estimate the influence of pleasing actions and deportment, and the intellectual and moral worth of those who command respect, and discover and learn to avoid the glaring imperfections of others who do not—and in many other respects learn effectually to separate the chaff from the wheat. —*"The Physician Himself,"* by Dr. D. W. Cathell.

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[14] Ehrlich: Deut. Med. Wochenschr., 1898, xxiv, 597.

[15] Zeitschr. f. Hyg. u. Infektionskr., 1899, xxxii, 214.

[16] Ibid., 1901, xxxvi, 299.

Special Article.

THE PURIFICATION OF WATER SUPPLIES BY SLOW SAND FILTRATION.

(Continued from page 911.)

III.

WATER FILTRATION IN THE UNITED STATES (CONTINUED).

B. THE ALBANY FILTRATION PLANT.

The Albany plant is the largest of its kind now in operation in this country and also deserves consideration from the fact that the best and most modern experience was utilized in its construction. The sanitary results flowing from the operation of this filter are especially noteworthy since before filtration the water had proved highly injurious to the public health.

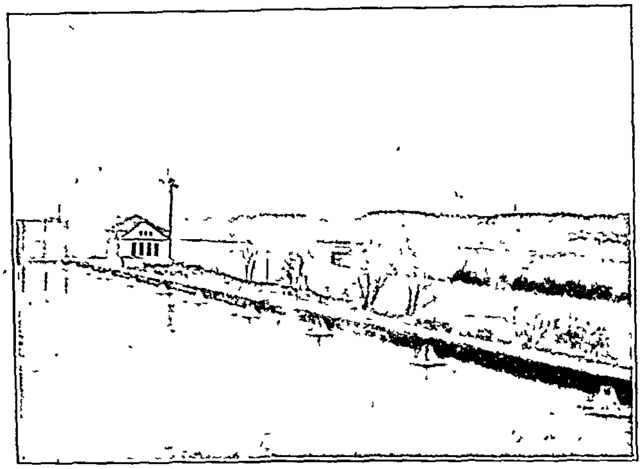

Fig. 3.—General view of Hudson River, pumping station and sedimentation basin, Albany water works.

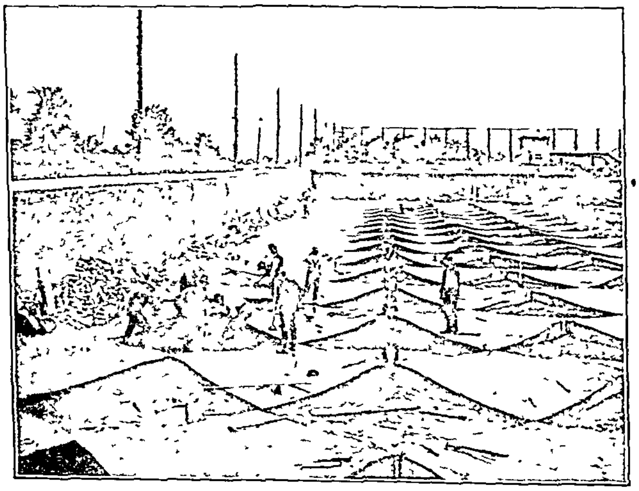

Fig. 4.—Construction of filter basin. Laying water-tight bottom.

The city of Albany, N. Y., with a population of about 100,000, is situated on the Hudson river about eight miles below the mouth of the Mohawk. The total urban population in 1900 on the watershed above Albany was about 376,000 and, including the rural population, amounted to 80 per square mile, or somewhat less than the number on the Merrimac watershed above Lawrence (104). Before the establishment of the filtration plant the raw water of the Hudson river constituted the main supply of the city. The opportunities for pollution at Albany were even more grossly conspicuous than at Lawrence. Only four miles above the water intake, the city of Troy, with a population of 60,651, poured its untreated sewage directly into the Hudson river and, in addition to this source of flagrant contamination, the city of Albany was guilty of the monstrous sanitary blunder of fouling its own nest. Although the majority of the Albany sewers entered the river below the intake, the tidal currents, which at low water make themselves felt as far up the river as Albany, would at times sweep the city's own sewage up stream and into the water intake. The freshness of the sewage, both from the Albany sewers and from the close-lying city of Troy, rendered the pollution at Albany much more dangerous than was indicated by the simple proportion of "organic matter" in the river water. In view of these circumstances it can not excite amazement that typhoid fever prevailed at Albany to an alarming extent, and that the city enjoyed the distinction of maintaining one of the highest death rates from typhoid fever in the United States.

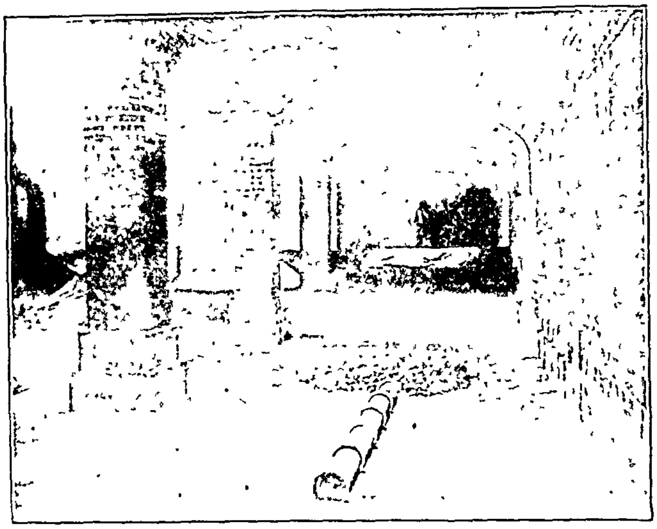

Fig. 5.—Interior of filter bed, showing roof, underdrain and layer of sand and gravel.

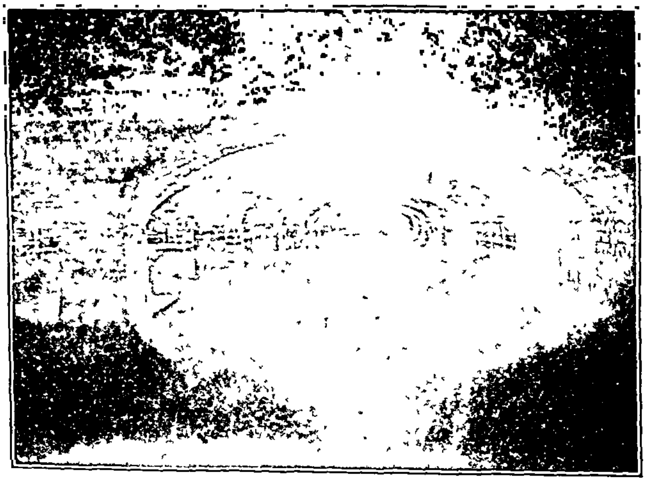

Fig. 6.—Interior of filter basin during operation.

The Albany filter was built in 1898-9 and was completed Sept. 6, 1899. A portion of the city supply—about two-sevenths—is still derived by gravity from small lakes and reservoirs, so that it is impossible to draw entirely precise conclusions in regard to the relative effect of filtered and unfiltered water. The apparent influence of the filter in reducing typhoid fever in Albany will be considered presently.

The Albany filter was constructed in an economical and highly efficient fashion. The plant consists of a pumping station, where the water is pumped from the "back channel" of the Hudson river into a sedimentation basin with a capacity of about 14,000,000 gallons. From the sedimentation basin the water passes to the filter beds, eight in number and provided with covers of vaulted masonry. The cost of the covers formed as much as 30 per cent. of the total cost of the filter, but the unfortunate experience of Lawrence, which we have already recounted, and of other places have supplied abundant evidence that in a cold climate the expenditure for covers is warranted by all considerations of economic and efficient management. It may be said in passing that the total cost of the Albany filters was much less—$45,600 per acre, including covers—than the average figures derived from various European construction accounts. It must be admitted, however, that at Albany the site and other conditions were especially favorable and that at the time when the filter was built the market for the materials of construction was at a much lower level than at present.

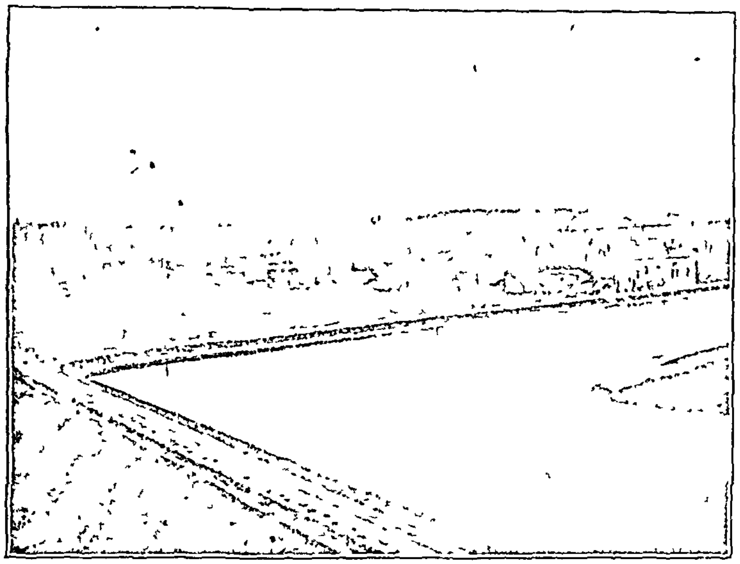

Fig 7.—General view of completed sedimentation basin, central comb covered filter (with ventilators showing) and laboratory.

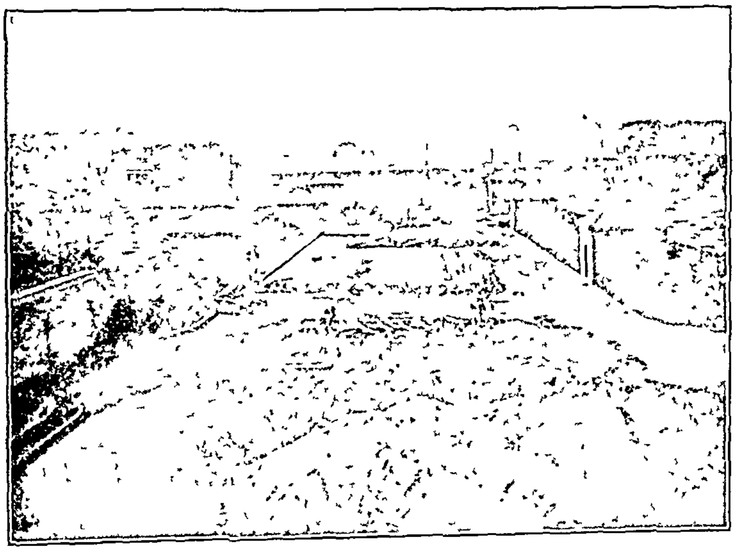

Fig. 8.—Central comb and gate-house, sand washing in the foreground.

One particular in which the Albany plant departs advantageously from the older European type of filter is in the specially careful arrangement of the layers of gravel on which the sand rests. The whole gravel layer is considerably thinner than in the older works and is composed of three strata of graded sizes. The use of gravel of different sizes prevents the upper layers from being washed into the lower ones, and is regarded as being a highly commendable feature of the Albany plant. The pure water reservoir, which is rather unusually small, and the ingenious and novel method of controlling the rate of filtration involve other features of engineering interest which need not be here considered.[6]

The Hudson river water, as regards turbidity, occupies a position midway between the very clear waters of New England and the muddy waters of the Middle West. When high turbidity appears in the water it persists longer than in the Merrimac river. In respect to pollution, the quality of the Hudson river at Albany is far below the average of surface waters that are safe for drinking in a raw state. The bacterial content is high (Table 3), and the unmistakable indications afforded by the typhoid fever death rate show that much of the organic matter in the water is sewage of recent origin.

The amount of water filtered between scrapings, which affords some clew to the nature of the water filtered, averaged in 1901 about 68,000,000 gallons per acre, or about 47,000,000 per individual filter bed. The average number of days between scrapings was about 25. The bacterial efficiency of the plant is shown in the following table:

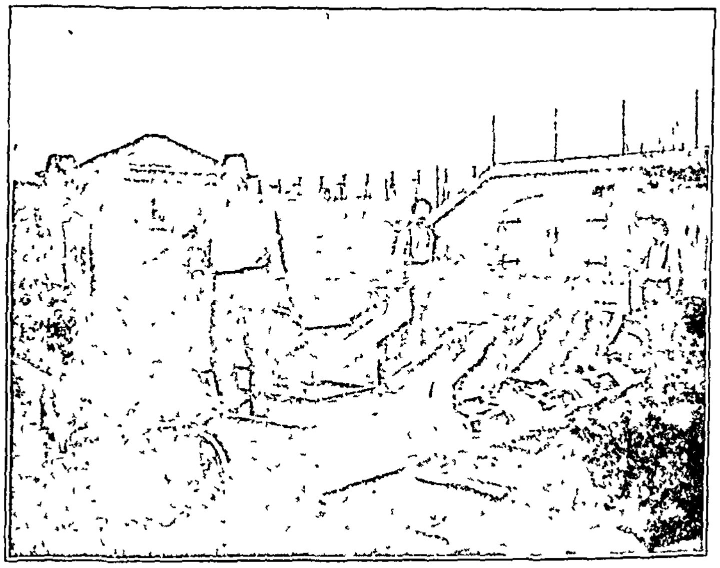

Fig. 9.—Sand washing.

TABLE 3.

Year.	Bacterial Count—Average per cc. In Raw Water.	In Filtered Water.
1900	33,600	265
1901	47,800	470
1902 (nine months)........	25,500	134

Attention may be called to the large number of bacteria in the raw water of the Hudson at Albany as compared with the Merrimac water. The percentage removal appears from the averages to be about the same as at Lawrence, although the actual number of colonies appearing in the effluent are somewhat greater at Albany. Averages, however, are notably misleading, as shown by the following table giving the results for a single year:

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[6] We are indebted to Mr. Allen Hazen, the designer of the Albany filter, for his courtesy in allowing us to reproduce some photographic views of the Albany filter in various stages of construction and completion. Certain of the general features of interest common to all modern filters are shown in these photographs, as well as the special features of the Albany plant.

TABLE 4.

1901.	Raw Water. Average.	Pure Water. Average.
January	71,400	300
February	105,100	2,117
March	123,700	1,601
April	107,600	276
May	26,500	92
June	15,800	106
July	7,700	39
August	8,300	42
September	7,600	46
October	4,350	40
November	21,635	290
December	74,100	680

It will be observed that during the greater part of the year the number of bacteria in the effluent is very much below the average for the whole year. The high numbers recorded during the winter months appear to be due to the fact that the filter is forced beyond its legitimate capacity to meet the excessive consumption or waste of water in cold weather. The operation of the filter beds in winter at a rate far above their normal capacity causes a falling off in the bacterial efficiency.

The effect of the operation of the filter on the death record in Albany has been marked. The following table shows the average number of deaths from typhoid fever during the ten years preceding the opening of the filter, and the corresponding number of deaths since the filter was put in operation:

TABLE 5.

DEATHS FROM TYPHOID FEVER IN ALBANY BEFORE AND AFTER THE *OPENING OF THE FILTER.*

Months.	Average No. of Deaths for 10 Years Prior to Opening Filter.	1900.	1901.	1902.
January	11	3	2	2
February	11	1	3	3
March	12	3	1	2
April	9	5	1	1
May	4	4	1	2
June	4	1	3	1
July	4	3	0	1
August	7	6	3	4
September	6	4	4	2
October	4	5	0	0
November	5	4	0	0
December	7	0	1	0
Total	84	39	19	18

A comparison of the cost of operation of the Albany and Lawrence plants, together with that of two smaller sand filters, is given in the following table:

TABLE 6.

COMPARISON OF COST PER MILLION GALLONS OF OPERATION OF FILTERS *AT LAWRENCE, ALBANY, POUGHKEEPSIE AND MT. VERNON.*

	Lawrence. 1895-1900	Albany. 1899-1900	Poughkeepsie.		Mt. Vernon.	
			1877-1900	1898-1900	1895-1900	1896-1900
Based on period of...	6 years.	501 days.	24 years.	3 years.	6 years.	5 years.
Average total cost.. . . .	$8.05	$1.66	$3.27	$2.42	$3.16	$3.33
Average cost of removing ice and snow	2.27	. . . . .	. . . . .	0.47	. . . . .	0.35
Average cost, minus snow and ice... .	5.78	. . . . .	. . . . .	1.95	. . . . .	2.98

(*To be continued.*)

Clinical Report.

A CASE OF ACCIDENTAL ELECTROCUTION FROM ORDINARY ONE HUNDRED VOLT ALTERNATING LIGHTING CURRENT.

C. VAN ZWALUWENBURG, M.D.
RIVERSIDE, CAL.

To those who study the effects on the system of electric currents the following record of death from an alternating lighting current of only 100 volts may be of interest:

S., a carpenter, well built, stocky, about 5 feet 9 inches, weighing about 165 pounds, was at work repairing a building in Riverside, Cal., about 2 o'clock p. m., Aug. 11, 1903. The building, a two-story block with flat tin roof, had been scorched by fire April 22, 1903. S., with two companions, was making repairs in the attic immediately under the roof in a space only about 4 feet high, between ceiling and roof joist. He was perspiring very freely—the temperature there must have been about 100 F., with no air stirring. As he crouched on his knees and reached over to drive a nail into a studding he threw his head back just enough to bring the occiput in contact with a wire running to a drop light in the ceiling. The insulation had been burned away and in his condition of extreme perspiration, his clothing soaked, all the conditions for transmission of current were at their best. He was probably on a gas pipe, which made an excellent contact for grounding the current. At the instant of contact he made an outcry as though he had received some slight injury, then straightened backward in a general convulsive movement until his body lay in extreme opisthotonos, having carried the wire down from its fastenings, but continuing the contact at the same point.

The companion nearest him rushed to his assistance, received a considerable shock from handling the wire, but succeeded in removing the victim from contact in from 15 to 30 seconds. It was between 5 and 10 minutes before he could be brought down a ladder to the floor, during which time he was said by his companions to gasp several times. By this time Dr. Parker had arrived and at once began artificial respiration, which was continued systematically with tugging on the tongue for one hour, but no further signs of life were elicited at any time. I arrived about 15 minutes after the accident occurred. Rubbing and applications of hot and cold water and hypodermics of strychnin, digitalin and nitroglycerin were also used.

The only evidence of injury was a slight burn about 3/16 of an inch wide and about 2½ inches long, beginning at a point about 1 inch back of the tip of left mastoid and extending backward and upward into the hairy scalp to a point about midway between the posterior inferior angle of the left parietal bone and the median line of the occiput. The burn was very superficial, scarcely through the cuticle.

Our city electrician was promptly on hand and made a careful search for cross wires which might have carried in a heavier current, but none could be found, and he declared after testing the current that the only charge Mr. S. received was the ordinary lighting current as distributed to individual or chandelier lights. This current is the ordinary lighting current, 100 volts, varying slightly and occasionally perhaps reaching 110, run from a 50 cycle 6,000 alternation system.

The explanation of the fatal effect of so light a current must be:

1. The point of contact at the base of the brain.
2. The probable grounding through the gas pipe.
3. The absence of resistance in the skin on account of its thorough saturation with saline water from extreme perspiration.
4. The length of time contact continued on account of the body falling on the wire.

I find very little literature on this subject of the strength of current necessary to cause death, and that is my reason for reporting this case.

This report has been submitted to Dr. A. S. Parker, Dr. C. S. Dickson, the coroner who took the testimony in the case, and Mr. F. A. Worthley, our city electrician in charge of the lighting plant.

Needs Investigation.—The *Alienist and Neurologist*, calling attention to the king snake, whose assault no other snake can withstand and which is immune to the poison of the cobra and of the rattlesnake, asks: "Is the blood of the king snake *antidotal to other snake poison?* Here is a suggestion for the laboratory of experimental toxicology. Toxicological therapeutists may find in the serum of the *king snake* an antidote for the sting of the cobra, and the rattler and other venomous reptiles."

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SATURDAY, OCTOBER 17, 1903.

A UNITED PROFESSION IN NEW YORK STATE.

The grounds for discord that have so long existed between the members of the profession of New York state have been removed, and there is no longer any reason whatever why there should be two opposing organizations, each having the same objects. That this fact is realized is shown by the recent action—as reported in our last week's issue—of the New York State Medical Association, and harmony in the near future seems to be well assured.

The action of the council and fellows of the New York State Medical Association in appointing a committee with full powers to meet with a similarly qualified body from the Medical Society of the State of New York has been met by the latter body, and consequently we may hope for immediate measures to consummate the union of the two organizations. There may be some difficulties, or rather minor details, for adjudication by the committees, questions of what should be of comparatively slight importance, but nothing that ought to in any way prevent or seriously delay union. The time has now arrived for individuals to lay aside personal feelings, jealousies and selfishness, if anything of the kind still remains, for the sake of the good of all. There is now no real grievance; no principle whatever involved, and we are sure that no one desires schism for schism's sake alone. Whatever there may have been in the past to excite bad feeling should be ignored; a disunited medical profession is an evil that all should strive to overcome. We have no expectation, however, that there will be even a minimal percentage of members of either of the state bodies that will take any exception to the proposed reunion. We have full faith in the members of the committees on both sides, as broad-minded men having the best interests of the medical profession at heart, and believe that they will let nothing stand in their way in bringing about the desired result.

With a united profession acting as a unit in the state, the possibilities for advancing medical interest and forwarding the necessary measures, legislative and otherwise, for the protection of the public, as well as for the welfare of our profession, will be doubled. We know from the activity of the bodies separately what they can do when united. It is union, not competition—with its accompanying bad feeling and jealousies that have existed in the past—that is desired. We sincerely hope that there will be no serious difficulty or delay in bringing about that harmony in the Empire state which has for years been so anxiously hoped and watched for by the profession of the whole country, and the lack of which has been a misfortune to all concerned. Union must come; to delay it is worse than folly.

DRUG HABITS.

In the October number of the *Journal of Pharmacy* is an interesting article by Messrs. Eberle and Gordon of the committee appointed by the American Pharmaceutical Association to report on the acquirement of drug habits. They give the results of a statistical inquiry which has been instituted, but which is necessarily somewhat incomplete. There is more of interest in their general remarks on the subject, since they are based largely on personal knowledge.

The report shows that the opium habit is markedly increasing; the majority of the class known as habitual criminals are opium habitués. The reporters state that the drug habit has alarmingly increased in the Army and Navy and that opium smoking has been acquired by some of our soldiers in the East. In the Navy this method of taking the drug is less common, but the habit of opium eating has been acquired to some extent in the intercourse with natives of foreign countries. It is encouraging to note that not a single case of the drug habit coming from the prescribing of opium by medical officers could be recalled; opium and the allied drugs are very guardedly and carefully used by the Army and Navy medical officers. An unfortunate percentage of the members of the hospital corps have drifted into the habit from the constant opportunity in handling the drug.

That part of the report which refers to the use of cocain and the cocain habit shows a worse state of affairs. The drug is sold undisguisedly in many drug stores and the druggist buys it in 100-ounce lots, sometimes as often as once a month. One drug store in Philadelphia which does little prescription and no hospital business, is particularly mentioned, though not by name, and is referred to as only one instance out of many.

The effects of the cocain habit are not so generally known as are those of morphin, but there is nothing yet discovered that has such a baneful effect on the user. One of the reporters says that he has seen the drug literally "turn a bright high-principled man into a sneak thief and liar absolutely without regard for morality or principle. One redeeming feature is that the habitual use of cocain seems to lessen sexual ability and desire, so there is less danger of its transmission by heredity." Nine-tenths of the cocain habitués seem to have acquired the habit by the use of patent medicines or prescriptions, and it is rapidly supplanting the use of morphin among men and women of the "under world." The importation of the cocain salts has increased from $176,948 worth in 1901 to $254,704 in 1902 and $199,826 for the first nine months of 1903. Averaging $3 per ounce as the value of cocain, this gives us an increased importation of 25,000 ounces in 1902 and over 22,000 ounces for the nine months of 1903, a fact which speaks volumes in itself. The use of smoking opium is also increased in a similar manner, but the same was not so true of the morphin salt in 1902, but it has greatly increased in importation in the present year.

The need of legislation in regard to this matter should be emphasized. Something must be done; we have cocain laws in a few states and city ordinances in certain localities, but thus far practically little has been done to stop the baneful habits in this way. The amount of cocain, for example, that can be legitimately used for medicinal purposes certainly bears very little proportion to the total imported amount now used, and an increase such as is represented above is a very bad omen for the future of our population. National legislation is certainly required; the United States government permits the importation of smoking opium for no better reason than the vender has for selling it, and it is a national disgrace that such is the case. Over 100,000 pounds of opium for smoking purposes were imported last year, and the importation is increasing each year. If matters go on as at present the time will come when there will be as important a business interest at work in the matter of drug selling and encouraging the habits as already exists in the case of alcohol.

Any new drug which can affect the nervous system seems to obtain its habitués. The heroin habit has made its appearance, headache remedy habits are reported, diarrhea remedies are reported habitually used by a large number who sooner or later become morphin or laudanum users. Unfortunately, a large number of cases are reported as directly due to careless prescribing by physicians. Physicians must be guarded and careful in the use of such remedies and must discourage in every possible way the use of proprietary remedies containing them; we must work with all our might for national and local legislation restricting the use of the habit-producing drugs and for the suppression of drug habits.

STOKES-ADAMS DISEASE.

In spite of the fact that this remarkable clinical condition was described by Adams in the Dublin Hospital Reports as early as 1827 and much more fully by Stokes in his article entitled, "Observations on Some Cases of Permanently Slow Pulse," in the *Dublin Quarterly Journal of Medical Science* in 1846, too little attention has been paid to it by the profession at large—so little noticed, indeed, that many good practitioners of to-day scarcely know what is meant by the term.

The disease, or rather symptom complex—for the anatomic lesions are not constant nor the etiology uniform—is, however, by no means an infrequent one, and it is characterized by a group of symptoms which permit it to be easily recognized. The patient suffers from attacks of syncope, often described as "apoplectic attacks," associated with a very slow pulse rate—28 or 30 beats to the minute. The slow pulse may be due either to true or false bradycardia; occasionally there may be complete cardiac arrest for as long as half a minute, after which the heart again begins to beat. Accompanying the more severe attacks there is usually marked involvement of the vasomotor system, revealed by pallor, vomiting and sweating, and sometimes by numbness and tingling—symptoms resembling closely those which occur in angina pectoris.

The nervous features of the disease are those which are most troublesome to the patient, and concerning which he consults a physician. Complaint is made of attacks of dizziness and staggering without known cause, or there may be sudden "fainting spells" with complete loss of consciousness. In some instances the symptoms resemble closely an attack of apoplexy; there is deep coma with loud, stertorous breathing and facial congestion, but the pseudo-apoplectic nature of the attack is shown by the absence of consecutive paralysis. Occasionally actual epileptiform seizures occur.

Three groups of cases are distinguished: 1, A postfebrile group; 2, a neurotic group, and 3, an arteriosclerotic group. By far the majority of the cases met with belong to this third group. The pathology of the affection is as yet quite unknown. The cases are largely confined to the period of advanced life, though occasionally a young individual is attacked. The prospect of recovery, once the severer nervous symptoms have appeared, is unfavorable. The attacks may go on occurring, however, for years. Death is, as a rule, sudden in one of the seizures. The most that can be done in the way of treatment is to attempt to prevent the progress of an underlying arteriosclerosis when that exists. In the syncopal attacks nitrite of amyl may be used.

Stokes-Adams disease has in recent years begun to attract the attention of a number of the ablest clinicians in this country and abroad, and it is to be hoped that we shall ere long have new light thrown on its etiology and pathogenesis. Among the more valuable articles dealing with the subject are those by Huchard[1] in France, Hoffmann in Germany and Osler[2] and Edes[3] in this country.

GRANTS FOR SCIENTIFIC WORK.

One of the first results of the small grants given by the American Medical Association to promote scientific research is embodied in the article by Gustav F. Ruediger in the present issue of The Journal. It appears that pathogenic streptococci have the power, under certain conditions, of producing a substance that causes laking and destruction of red corpuscles (hemo-

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1. In his "Traité des maladies du coeur."
2. Lancet, Lond., Aug. 22, 1903.
3. Phil. Med. Jour., 1901.

lysis). In the case of rabbits, this laking occurs during life in the course of streptococcus infections. In view of the frequency and of the gravity of streptococcus infections in man, this being probably our most frequent secondary infection and certainly the principal element of danger to life in the course of smallpox and scarlet fever, any definite advance in our knowledge of the pathogenic action of streptococci is most desirable. Now the production by streptococci of a definite poison to red corpuscles explains very satisfactorily the grave anemia that commonly develops in streptococcus infections. Ruediger shows that streptocolysin is a single substance, thus differing from the majority of hemolysins which depend for their action on the combination of two different elements, the intermediary body and the complement. Streptocolysin is in nature like the diphtheria toxin and tetanus toxin.

This fact having been established, further work may develop other similarities between these bacterial toxins, e. g., the property to cause the development of specific antitoxins. Streptococcus infections have proven to be a serious stumbling block in the way of successful treatment by antiserums. Success perhaps awaits more exact knowledge of the modes in which streptococci cause their pathogenic effects. At present the exact mechanisms of streptococcus infections are not clearly understood, and on this account they invite to continued, persistent, detailed investigation, and it is to be hoped that work of this kind may be stimulated by the Association grants.

Grants for research are probably the most fruitful method of investment for the surplus funds of the Association. The returns will consist, first, in the immediate results of the particular investigations made possible by the grants and, secondly, in the encouragement thus given to the development of investigators. "It is in the multitude of scientific workers that there is hope. The man of genius is a rare bird, and we must have a numerous class from which to produce him." Perchance the grants given by the Association may prove, sooner or later, the welcome means of discovering some man of genius and starting him on a career of epoch-making investigation. This phase of the setting aside of funds for research should be kept prominently in view by the committee having the matter in charge. When a grantee demonstrates his ability to produce definite results from actual, original investigation, let him receive all possible encouragement, to the end that he may be able continuously and persistently to push his work forward.

THE EVOLUTION OF THE COLOR SENSE.

A number of years ago Gladstone theorized—from the poverty of words indicating color in ancient Greek literature—that the color sense, as we now possess it, is a comparatively late acquisition. His view was strongly combated at the time and has not since received any general acceptance. It is, of course, impossible to say just what color vision the Homeric Greeks possessed, and we have perhaps no modern races exactly corresponding to them in social and intellectual development.

We have, however, some facts that may be considered as favoring Gladstone's theory; we know, for example, that certain refinements of sensation are cultivatable, and there is some testimony that in some of the lower races the special sensibility in one way or another is not exactly the same as with the more civilized races. Accurate psychometric studies of savages have hitherto been largely lacking, but attention has been directed to the need, and we may obtain data that will decidedly modify the prevalent views on the subject. An indication that such may be the case is apparently afforded by the recently published psychometric studies of the natives of Murray Island, in Torres Straits, by Dr. W. H. R. Rivers, noticed in *Nature*, September 3. His observations are especially significant, for he found the color sense decidedly deficient in these savages, and the objection that only the descriptive terms were wanting was not found valid—sensation was most defective just where the nomenclature was most lacking. The natives generally recognized red and yellow, and green for special reasons, and had names for these colors, but their ideas of blue were very indefinite, and it was confused with blue green or dirty brown. Only the most decided blue tint seemed to make an impression. A curious fact noticed was the complete absence of red-green blindness, and another was the fact that the peripheral retinal perception of blue was most complete, and its visual field the most extensive, which is contrary to the rule. Other senses tested by Dr. River's colleagues showed aberrations which were decided, though perhaps less striking than those for color. Acuteness of hearing was lower than in the white, as were also the pain and weight senses. Tactile sense was more acute, and the visual reaction time slower, while the auditory reaction time was the same as in the European. There was no name for bitter, but the sensation evidently existed.

The savage races of the earth are disappearing rapidly, and the scientific value of such investigations on their psychometric aberrations can not well be over-estimated. It is only by such research that we can even approximately settle such questions as that raised by Gladstone, and the bearings of these points on the early history of our race can readily be appreciated. If followed up and associated with equally thorough anthropometric studies, brain measurements, etc., they may throw light on many questions of development and physiology. They should be more generally made, and should be correlated with every phase and grade of social development from the lowest savages up to the highest uncivilized races, and it may be that practical as well as scientifically valuable results will be obtained. The better knowledge of the evolution of the color sense may lead to methods of its education and betterment and the prophylaxis of color-blindness.

SYPHILIS IN ANTHROPOIDS.

Medical men everywhere will watch with interest the progress of the experiments now being conducted by Metchnikoff at the Pasteur Institute in Paris on the susceptibility of the anthropoid apes to syphilis.[1] It is stated that thus far the French scientist has succeeded in producing a typical initial lesion of syphilis in one animal shipped to him from Liverpool by inoculating it with virus from a secondary syphilitic lesion in man. The celebrated syphilographer, Fournier, has examined the animal carefully and gives it as his opinion that the lesion produced is undoubtedly specific. If these statements are verified, it must be granted that a most important step forward has been made in our knowledge of this most ancient and prevalent disease; for the experience of the last few years has taught us that one of the first *desiderata* for the successful study of an infectious disease is to be able to reproduce it in animals, so that it can be subjected to experimental study and the conditions of experimentation be controlled at will. Hitherto syphilis has been unknown in animals other than man. Attempts have been made repeatedly to transmit the disease to lower animals, but without success. If any animal is susceptible, it is most likely to be found among those highest vertebrates which are so fearfully human in form and whose tissues are presumably chemically most similar to the tissues of man. The French savant has proceeded on this theory and apparently his efforts have been crowned with success. The cost of experimentation on gorillas and allied forms will, of course, be enormous; a single animal sold to the Physiologic Laboratory at Liverpool not long ago brought no less than $1,800 in cash to the importer. But in the investigation of a disease like syphilis, the money should be easily forthcoming as soon as those who have it to give can be assured that its expenditure offers a fair hope that something greater than anything we know yet may be done in preventing the spread, or in promoting the cure, of this frightful disease.

Medical News.

ILLINOIS.

Smallpox at Westfield.—It is reported that smallpox is prevalent in Westfield to such an extent that the public schools have been closed.

Must Report Births.—Section 2 of the new law provides that "every physician, midwife, parent, or householder shall be paid for each report of birth made in the manner directed by the State Board of Health the sum of 25 cents." The law is mandatory and for its violation a penalty of a fine varying from $10 to $100 is provided.

Illinois Mortality for July.—During July, 1903, 4,903 deaths occurred in the State of Illinois, according to the mortality report for that month just published by the State Board of Health. This report is based on the certificates of deaths received in the office of the board from physicians outside of the larger cities of the state in which burial permits are required, from the registration officials of these cities, and from the coroners of the several counties. These certificates were forwarded to the State Board of Health under the provisions of the birth and death law of 1903 which repealed the Act of 1901 requiring a burial permit. The report has been delayed by the failure of several county clerks to furnish physicians and coroners with blank forms for reports of deaths. A few weeks ago the State Board of Health had printed and distributed among the physicans of the state over six thousand books of blank forms, and as a result several hundred belated reports have been received by the board during the past week. The published death-rate is slightly less than that of July, 1902, when 5,107 deaths were reported to the county clerks, but it is the opinion of the State Board of Health that many additional reports for July will be received during the present month. The reports for July, 1902, should be absolutely correct, as it was then obligatory on physicians to furnish a certificate of death before the burial of the body. The ten principal causes of death and the number due to each are given as follows: Gastro-enteritis in infants, 673; tuberculosis, 537 (tuberculosis of the lungs, 447; other forms, 90); accidents, 483; pneumonia, 218; typhoid fever, 88; suicide, 70; diphtheria, 57; whooping cough, 50; measles, 30, and scarlet fever, 32. The reports for July, 1902, showed 681 deaths from gastro-enteritis in infants and 542 deaths from all forms of tuberculosis.

Chicago.

Sherrington Banqueted.—Prof. L. Sherrington, Liverpool, was the guest of honor at a banquet given by the faculty of Rush Medical College, October 5. President Harper introduced Professor Sherrington to the faculty and delivered the address of welcome.

Dispensary for Maternity.—Contracts have been let for a dispensary to be built at the southwest corner of Maxwell Street and Newberry Avenue in connection with the Chicago Lying-in Hospital. It will be three stories high, 25 by 60 feet, and will cost $15,000.

Mortality.—For the week ended October 3, the total deaths were 467, an annual death-rate of 13.26 per 1,000, consumption leading with 55 and acute intestinal diseases coming next with 51. For the week ended October 10 the deaths were 427, an annual death-rate of 11.81 per 1,000, consumption again leading with 49, and being followed by acute intestinal diseases with 46.

Books Stolen from Marine Hospital.—A considerable number of valuable medical books, including Deaver's Surgical Anatomy in 3 volumes and Dennis' Surgery in 4 volumes, have been stolen from the library of the U. S. Marine-Hospital. Each volume has the government stamp on the title page. Should any of these books be offered for sale the surgeon-in-charge, Dr. Charles E. Banks, desires to be informed, that he may recover the books and prosecute the thief.

MARYLAND.

Frederick County Medical Society.—This society has purchased a three-story house in Frederick and will convert it into a hospital and training school for nurses. The board of directors has elected the following officers: President, Dr. William H. Wagner, Woodsboro; vice-president, Dr. D. Edwin Stone, Sr., Mt. Pleasant; secretary, Dr. Henry P. Fahrney, Frederick, and treasurer, Dr. William C. Johnson, Frederick.

Baltimore.

Deaths and Births.—The deaths for the week ended October 10 were 183, which is an annual rate of 16.88 per 1,000. There were 206 births, and 5 deaths from typhoid fever.

Personal.—Dr. Henry Barton Jacobs has returned from Europe.——Dr. Glanville Y. Rusk has been appointed to a position in the New York Pathologic Institute.——Dr. Norman McLeod Harris of the Johns Hopkins Hospital has received an appointment in the bacteriologic department of the University of Chicago.——Dr. E. H. Hume has gone to England.——Dr. Harry O. Wilmot of the City Hospital left, October 10, for Folsom, W. Va., where he will practice.——Dr. Mary N. Browne has been appointed demonstrator of obstetrics in the Woman's Medical College.——Dr. N. G. Keirle, Jr., is pursuing study in a special line of surgery at St. Mark's Hospital, London.——Dr. Albert Shelley has returned from England.

MASSACHUSETTS.

Thousands for Hospitals.—The hospital of the city of Melrose will receive $1,000 from the estate of the late Royal F. Barry. ——The Clinton Hospital Association receives $10,000 by the will of Richard W. Foster.

Smallpox Stamped Out.—Smallpox may be regarded as stamped out of Massachusetts. Very few cases exist within the borders of the state, these few are nearly all imported and no new cases at all are reported for the week ended October 10.

Associated Boards of Health.—The quarterly meeting of the Massachusetts Association of Boards of Health will be held in Clinton October 22. A paper by Dr. Robert W. Hastings, resident physician of the Boston Floating Hospital, on

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[1] The Journal A. M. A., October 3, page 861 and previously.

"Etiology and Treatment of Summer Diarrheas of Infants," will be followed by a description of the great waterworks of the metropolitan water supply. The dam and reservoir, which are located at Clinton, will then be inspected by the association.

Deaths and Diseases.—During the five weeks ended October 10 there were reported 970 deaths in Boston, a decrease from last year of 40 and an average annual death rate of 16.76 per 1,000. Among the prominent causes of death were: Pneumonia, 61; whooping cough, 4; heart disease, 80; bronchitis, 16; and marasmus, 31. One hundred and seventy-four cases of diphtheria, with 19 deaths, were reported; 92 of scarlet fever, with 1 death; 137 of typhoid fever, with 20 deaths; 75 of measles, and 184 of tuberculosis, with 115 deaths.

MISSOURI.

Personal.—Dr. Edward J. Davis, St. Louis, superintendent of Provident Hospital, has been appointed resident physician of the Indian school at Zuni, N. M.

Sanitarium Burned.—At a fire, October 1, which destroyed the private sanitarium of Dr. Benjamin B. Ralph, Kansas City, one patient was killed and five were badly injured. The loss was $4,000.

Pleaded Guilty.—Dr. Walter McKinley, Grant City, charged with having violated the postal laws by sending forbidden matter through the mails, pleaded guilty, concluding "that it was wiser to plead guilty and pay a fine than to go to the trouble and expense of fighting the case."

Forgiven This Time.—Nolle prosequies were entered in the cases of four physicians charged, October 1, with not having registered at the St. Louis health department. This action was taken at the request of the board of health. The physicians were Drs. Oscar P. Hedger, 2628 Osage Street; Harmon Mehrs, 3300 Commonwealth Avenue; Charles McGinnis, 3204 South Jefferson Avenue, and Harry Upshaw, 3762 Morgan Ford Road.

Crusade Against Quacks.—A warrant has been issued against Charles De Meyer, 919 Olive Street, St. Louis, for practicing medicine without a certificate from the State Board of Health. This is the first state case made by the health department of St. Louis in its efforts to purge the city of irresponsible and irregular practitioners.——Mrs. Sylvia Pfeiffer, St. Louis, was fined $25 and costs for failing to register with the board of health, as required by law.

University Year Opens.—The Marion-Sims-Beaumont College of Medicine, the medical department of the St. Louis University, opened for the year, October 1, with an increase in the number of students. Among the additions to the faculty are the following: Dr. B. Meade Bolton, professor of pathology and bacteriology; Dr. Albert C. Eycleshymer, director of the department of anatomy, histology and embryology; Dr. Augustus V. L. Brokaw, professor of operative and clinical surgery; Gustavus D. Hinrichs, professor of chemistry and director of chemical laboratories; Peter Potter, associate professor of anatomy; Herbert P. Johnson, associate professor of bacteriology; James M. Wilson, instructor in embryology and comparative anatomy, and S. Walter Ransom, instructor in research work.

NEBRASKA.

Hospital Closes.—The board of directors of the Fremont hospital decided that the institution could not be made to pay, and it was closed permanently September 30.

Going to the Philippines.—Drs. C. L. and Leta M. Pickett, Tecumseh, sailed for Manila, September 19. They are to be stationed as medical missionaries at Laoag, Luzon, 250 miles north of Manila.

Colleges Open.—The year's work of the Omaha Medical College, the medical department of the University of Nebraska, was inaugurated September 22 at a meeting at which the principal address was delivered by Dr. Henry B. Ward, dean. ——The fall term of Creighton Medical College, Omaha, opened September 22.

Hold Charges in Abeyance.—The State Board of Health, in the case of Dr. Charles W. Downs of Omaha, charged with distributing pamphlets tending to corrupt public morals, has decided to hold the charges in abeyance, on the plea of the accused that he was ignorant of the law, and on his promise not again to offend.

Irregular Fined and Banished.—Salomon T. Metty, who has claimed to be able to cure all diseases, but had not obtained a license to practice from the state medical board, was fined $100 and costs, $26.50, at Nebraska City, September 30. His friends paid the fine, and he was released on agreeing to leave that section of country. At the trial it was brought out that the defendant was a horse-trainer by profession.

NEW YORK.

Sexagenarian Takes Examination.—Among the candidates who appeared at Syracuse, September 18, was a graduate of Denver University, 64 years of age.

College Opening.—The seventy-third session of Albany Medical College was commenced, September 22, with addresses by Dr. Willis G. Macdonald and President Andrew V. V. Raymond of Union University. A portrait of Dr. James H. Armsby, for many years professor of anatomy and surgery, was unveiled. ——The medical department of the University of Buffalo was formally opened, September 28, with an address by Dr. Carlton C. Frederick.

Personal.—Dr. George Blumer, Albany, has resigned as adjunct professor of pathology and bacteriology and has been succeeded by Dr. Richard M. Pearce of Philadelphia, who will have as his assistants Drs. E. M. Stanton, New York, and Charles K. Winne, Mount Wilson, Md.——Dr. Montgomery A. Crockett of Buffalo has returned from a three months' visit to Germany and Switzerland.——Dr. Charlotte B. MacArthur, Rochester, has been appointed assistant physician of the Willard State Hospital, vice Dr. Ernestine J. Hills, deceased.

New York City.

Physician Shot.—Dr. Rodney C. Combes, Corona, Borough of Queens, was shot, October 7, in the right leg by the husband of a patient who recently escaped from his sanitarium.

Cornerstone Laid.—The new building for St. Mary's Hospital, Jamaica, is under construction. The cornerstone was laid September 20; the hospital is to accommodate about 300 patients.

Hundreds Barred.—As a result of medical inspectors' reports the board of health has excluded from the schools 175 children suffering from trachoma, 139 from conjunctivitis, 59 from parasitic diseases, and 3 from skin diseases and one from tonsillitis.

Memorial Hospital Sold.—The Memorial Hospital for Women and Children, Brooklyn, was sold at auction under foreclosure proceedings, September 22, for $96,500. It is understood that the purchase was made on behalf of the Jewish Hospital Society.

Jury Disagreed.—In the suit for malpractice brought by an alcoholic patient against Drs. G. Lenox Curtis and John H. Storer, in which he alleged that he had been seriously injured while undergoing electric-light treatment and had been damaged to the extent of $10,000, the jury disagreed.

Deplore Robert Newman's Death.—At a special meeting of the faculty of the New York School of Physical Therapeutics, September 14, resolutions were adopted bearing testimony to the honesty, courage, and kindliness of the late Dr. Robert Newman, and extending its sympathies to the bereaved family.

Cornell Begins.—On September 30 the work of Cornell University Medical College began for the year with an increased enrolment in the junior and senior years, but with no increase in freshmen, due probably to the higher entrance requirements, which are practically the same as those for admission to the academic department of the university.

Columbia Medical School Opens.—The opening exercises of the College of Physicians and Surgeons were held September 24. Dr. Nicholas Murray Butler, president of Columbia University, presided, and in a brief address of welcome announced the foundation of a special medical library for the medical college. Dr. Walter B. James also spoke on "The Old and the New Medicine."

Official Changes.—Dr. Edward T. T. Marsh has been appointed president of the Board of Police Surgeons, vice Dr. Stephen G. Cook, removed. Dr. Henry P. DeForest has been appointed secretary of the board.——Dr. Frederick A. Jewett, chief of the bureau of contagious diseases, Brooklyn, has been made diagnostician to the department. His successor is Dr. Benedict of Manhattan.

New Contagious Disease Hospitals.—The health department has prepared plans for the building of a hospital to cost $75,000 in the Borough of Queens to accommodate 20 patients; a new pavilion with a capacity of about 200, near the Kingston Avenue Hospital; a scarlet fever building to accommodate 200 patients at the foot of East Sixteenth Street, and a small reception hospital at Richmond.

OHIO.

Fined For Assault.—Dr. Ralph E. Brake, Findley, was fined $150 and $28 costs, September 21, for assaulting Walter Herrick.

Western Reserve Opens.—The medical department of Western Reserve University, Cleveland, opened October 2 without formal ceremony.

License Revoked.—On account of habitual drunkenness, the State Board of Medical Registration and Examination, on October 6, revoked the license of a practitioner.

Hanna Endows Chair.—The medical department of Western Reserve University, Cleveland, has received $100,000 from H. Melville Hanna, to endow a chair of research in anatomy.

Rheumatism Specialist Fined.—"Dr." D. J. Zilkon, Cleveland, a so-called specialist on rheumatic diseases, pleaded guilty to practicing without a license and was fined $25 and costs, at Lorain, September 25.

Municipal Sanatorium Opened.—The new tuberculosis sanatorium at Cleveland was opened October 4, and 32 patients were transferred to it from the City Hospital. There is room for about 60 more patients. The fresh air and diet treatment will be carried on at the institution.

Personal.—Dr. Robert C. Heflebower, Cincinnati, has returned after a visit of five months to Denmark.——Drs. Arthur G. Helmick and William H. Pritchard, Columbus, have been appointed assistant physicians at the Ohio Hospital for Epileptics, Gallipolis.——Dr. William J. Wall, Jr., Cleveland, jail physician, has been deposed.——Dr. William L. Buechner, who has been a member of the Youngstown Board of Health for thirty-three years, has resigned.——Dr. John E. Stemler, Cincinnati, has been appointed receiving physician of the City Hospital, vice Dr. Oliver P. Coe, resigned.——Dr. Ira B. Hunter, Sandusky, assistant surgeon at the Ohio Soldiers' and Sailors' Home, has resigned.——Dr. Madison E. Baldwin, Arcadia, has returned from Europe and has opened an office in Toledo.——Dr. William V. Anderson, Toledo, has been appointed workhouse physician, vice Dr. William S. Walker, resigned.

TENNESSEE.

Personal.—Dr. James M. King, Nashville, has been appointed a member of the board of education.——Dr. C. T. Love, McLemoresville, was thrown from his horse, September 21, and received severe internal injuries. He is now reported to be improving.

Open for Year's Work.—The medical departments of Vanderbilt University, the University of Tennessee and the University of Nashville, opened for the season on October 1.——Tennessee Medical College, Knoxville, will open November 2, a month later than usual, and will close June 1.

Faculty Changes.—At the University of Tennessee, Nashville, Drs. Robert Caldwell and W. Herman Myers were appointed demonstrators of anatomy, Hon. Nathan Cohn, professor of medical jurisprudence, and Dr. William E. Hibbett, professor of diseases of children. At Tennessee Medical College, Knoxville, Dr. Samuel M. Miller, professor of obstetrics and gynecology, has resigned, and has been succeeded by Dr. A. G. Kyle.

Rogers Lectureship at Memphis.—The directors of the Memphis Hospital Medical College have established a lectureship in memory of the late William E. Rogers, M.D., founder of that institution. Once during each session a lecture will be given by a specialist in some branch of medical science. The first lecture will be given about the middle of November by Dr. Charles H. Hughes, St. Louis.

TEXAS.

Yellow Fever.—Up to October 10, 172 cases of yellow fever had been reported at Laredo, with 7 deaths.

Epileptic Colony Open.—The State Epileptic Asylum at Abilene was ready to receive patients October 1. The building will accommodate about 200.

Personal.—Drs. Thomas B. Bass, Terrell, and J. H. Eastern, Waco, have been elected assistant physicians at the State Epileptic Colony, Abilene.——Drs. George H. Moody, San Antonio, and Frank R. Ross, Austin, have returned after a five-months' stay in Vienna.

College Openings.—The thirteenth annual session of the medical department of the University of Texas, Galveston, began October 1. The opening address was given by Dr. James E. Thompson, professor of surgery.——The medical department of Fort Worth University opened October 1.——Dallas Medical College opened for the year on September 28.

Faculty Changes.—The Board of Regents of the University of Texas, Galveston, have elected Dr. Alfred E. Thayer professor of pathology to succeed Dr. Allen J. Smith, who resigned to accept the chair of pathology in the University of Pennsylvania. Dr. Thayer was formerly instructor in pathology and bacteriology in the Cornell Medical School, New York, and has held the fellowship in pathology in Johns Hopkins University.——Dr. William S. Carter, professor of physiology, succeeds Dr. Smith as dean of the medical faculty.——At Fort Worth University, Dr. Robert B. Grammar has been made instructor on diseases of children; Dr. M. E. Gilmore, assistant in surgery and demonstrator of anatomy; Dr. William Rounds, assistant in pathology, and Dr. Charles P. Brewer, lecturer on materia medica and pharmacy.

GENERAL.

Boards of Health to Confer.—The eighteenth annual meeting of the Conference of State and Provincial Boards of Health of North America is to occur in Baltimore October 23 and 24. The program includes the subjects of yellow fever, venereal disease, infantile diarrhea, transportation of the dead, vital statistics, reform in county health officials' methods of work, and tuberculosis.

The Union of the Profession in New York.—A special meeting of the Medical Society of the State of New York was held Tuesday evening, October 13, in the Academy of Medicine, to consider the proposition for the union of two organizations, made by the New York State Medical Association.[1] The large hall was well filled, and amid enthusiastic applause and congratulations the society unanimously adopted the following resolution, which was introduced by Dr. B. St. John Roosa:

> WHEREAS, The New York State Medical Association, at a special meeting duly assembled, has, by unanimous vote, appointed a committee with full power to meet a similar committee of the Medical Society of the State of New York to arrange for the unification of the two organizations under the corporate name of the Medical Society of the State of New York, therefore, be it
>
> *Resolved*, That the committee of conference of the Medical Society of the State of New York, already appointed, be given power to vote, and other powers commensurate with, those recently granted the committee created by the New York State Medical Association for the purpose of unifying the two state medical bodies.

Rates to American Public Health Association.—Supplemental to the information in THE JOURNAL, Oct. 3, 1903, page 871, Dr. H. L. E. Johnson, chairman of the subcommittee of this association on railroad rates, states that one and one-third fare to Washington and return for the meeting, October 26 to 30, has been granted by the Canadian, New England, Trunk Line, Central, Southeastern, Western and Southwestern Passenger associations. The Western Passenger Association has granted this rate on the condition that 100 passengers from their territory attend the meeting, therefore the committee advises that if there is doubt that 100 will attend from the western territory, delegates should purchase tickets locally in this territory to some eastern gateway, viz.: Chicago, Peoria or St. Louis, and there purchase one-way tickets with certificates to Washington, D. C. The Transcontinental Passenger Association will sell nine-month return tickets at two cents per mile from Pacific and intermediate points to eastern gateways, viz.: Missouri River points, Chicago, St. Louis, etc., where delegates can purchase direct to Washington, D. C., on the certificate plan. Local ticket agents will explain and advise how to purchase most advantageously and arrangements should be made with them for through tickets and certificates several days before starting.

Army Death Rate Larger.—The mortality from cholera in the Army caused a slight increase in the total death rate during the fiscal year ended June 30, 1903. The Filipinos and Malays in the Army had a higher death rate, but a very low percentage of alcoholism. Venereal disease increased considerably and the loss of the canteen is blamed for this in part. The annual report of Surgeon-General Robert M. O'Reilly says in part, speaking of the above topics:

> THE RACIAL ELEMENT.
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> The enrollment of about 5,000 native Filipino scouts having added a new racial element to the army, it becomes a matter of much interest to study the comparative effects of disease on them and on our white and colored troops. For the whole army, at home and abroad, during the year 1902, the white troops showed an admission rate of 1,706.33 per 1,000 and a death rate of 14.40. The negro troops had 1,897.74 admissions and 24.11 deaths per 1,000, and the Malay scouts 1,707.21 admissions per 1,000 and 24.04 deaths. The white race, therefore, gave the lowest figures in sickness and much the lowest mortality. The black race led in both, although the Malay closely approached it in death rate.

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[1] THE JOURNAL A. M. A., October 10, p. 920.

LITTLE DRUNKENNESS AMONG NATIVES.

The freedom of the Filipino from the vice of drunkenness is strikingly shown when we find that out of 5,000 men only three individuals were treated for alcoholism in one year, and that while white soldiers were admitted to sick report on account of their own misconduct in the use of alcohol at the rate of 24.78 per 1,000, and colored troops at the rate of 11.70, the Malay scouts showed the extremely small admission rate of 0.62 per 1,000.

MORE VENEREAL DISEASE.

The steadily increasing prevalence of venereal disease is the most discouraging feature in the sick report of the army. During 1902 13,000 admissions were from this cause alone, equivalent to a rate of 160.94 per 1,000. Admissions to sick report from alcoholism in 1902 were slightly in excess of the number (including volunteers) for 1901. A total number of 1,830 cases, equivalent to 22.65 per 1,000 of strength, occurred.

INCREASE DUE TO LOSS OF CANTEEN.

It is impossible not to attribute a large part of the steadily increasing venereal disease of the army to the loss of the canteen, where the soldier, if he so desired, could get his beer throughout the month, but was not subjected to the temptations to intemperance and vice now attendant on the expenditure of a full month's pay at the low resorts infesting the outskirts of our military reservations.

LESS INSANITY.

A slight diminution of insanity occurred in the army during 1902. There were 138 new cases, equivalent to the admission rate of 1.71 per 1,000, which is almost identical with the rate for the decade 1891 to 1900.

CANADA.

A new marine hospital is to be built at Louisberg, N. S., where it is needed because of the increase of shipping.

A New Hospital for Epileptics.—Work has begun on the new hospital for epileptics at Woodstock, Ont. It is expected that the buildings will be ready for occupation Aug. 1, 1904.

An epidemic of smallpox has broken out at Big Pond, a country settlement near Sydney, Nova Scotia. Eleven cases are so far reported, but the disease is said to be of a very virulent type.

Brandon General Hospital.—The new hospital at Brandon, Man., is being erected 36 by 89 feet, of stone and brick, with two stories and a basement. It will contain thirty-two beds and will cost about $25,000.

Progress Toward the Alexandra Hospital, Montreal.—Ground has been purchased and architects have been requested to submit plans for the erection of a complete infectious hospital of four pavilions to accommodate 100 patients.

Personal.—Dr. J. N. Waters, London, Ont., is to take up the work among the farming boys of Central India, succeeding the late Dr. Menzies, who died at Mhow recently, a victim of the plague. Dr. Waters attended Toronto University and graduated from Trinity Medical College.——Dr. Macdougall King, Toronto, has been appointed instructor of physiology in the medical department of the University of Denver.

Hotel Dieu Hospital, Montreal, Report.—There were treated in this hospital during the month of August 603 in-patients and 2,117 out-patients. Of the latter 1,117 were treated in the eye, ear, nose and throat departments. The following is the newly-appointed house staff of the Hotel Dieu: Senior house surgeon, Dr. Bourgeois, and Drs. Ludovic Verner, J. R. Hamelin, G. E. Bedard, Henri Prevost and Eugene Latreille.

FOREIGN.

Italian Congress of Internal Medicine.—The thirteenth Italian congress of internal medicine will meet at Padua, October 29. The questions announced for discussion are "Individuality in Pathogenesis and Etiology of Disease," "Immunity in Acute Infectious Diseases," and "Interruption of Pregnancy in Internal Diseases."

The Approaching International Congress of Gynecology.—It is announced from St. Petersburg that the date of this congress has been definitely set for September, 1905. The czar has taken the congress under his special charge and elaborate preparations will be made to render the fifth international congress a memorable one.

Another Monument to Charcot.—A handsome portrait bust and bas-reliefs have been erected at the French watering-place of Lamalou-les-Bains to the memory of Charcot. The bronze bust is the work of Madame Charcot. The memorial was dedicated with great ceremony on the occasion of the visit of the party of 120 physicians on the "Medical Study Trip" of 1903. The biographic and historic addresses are given in full in the *Progrès Médical*, September 26.

Prophylaxis of Venereal Disease Among Students.—The Prussian minister of public instruction has notified the faculties of the universities that steps must be taken to warn the students against the dangers of venereal disease to health and morals. He suggests as the most appropriate means short public lectures for the students in all departments of the universities, the lecturers to be from the faculties of medicine, philosophy and theology. These faculties are bidden to organize such courses at their earliest convenience. Our medical exchanges remark that the co-operation of the theologians might be dispensed with as the students know well enough the ethical side of the matter but choose to disregard it. The extent of the peril to health, however, is not known to most of them, and in this they need enlightenment.

France Enforces Destruction of Rats on Vessels from Infected Ports.—The French authorities have been aroused by the outbreak of plague at Marseilles to issue more stringent regulations. The alleged disinfection of the bales of rags from Constantinople having proved inadequate to prevent infection of the workmen handling them, the minister of the interior has decreed compulsory destruction of the rats on ships from infected ports. The measures against the rats can be undertaken during the voyage or after arrival before unloading. They must be by means of apparatus whose efficiency has been established by the national health department, and which are to be placed at the disposal of the officers of the ships on arriving, under the surveillance of the local boards of health. A certificate will be issued by the latter when the regulation has been complied with, and the ship may then proceed to unload. Lortet and Teissier have been writing to the Paris lay press urging the uselessness of quarantines as at present conducted if the rats are left unmolested. The generation of carbon dioxid has proved insufficient, as although it kills the rats it leaves the plague bacilli unharmed. They recommend the Clayton apparatus as the best adapted for the purpose. It generates gases fatal to animal life while not injuring nor fading goods. Marseilles is now declared free from the plague.

Benefits from Organization of the Profession at Munich.—The solid, united front presented by the members of the profession at Munich to the sick benefit societies, has resulted in a signal victory. Every society has agreed to their terms and demands. This includes the adoption of the American plan of free choice of a medical attendant, annual remuneration of 4 marks per capita and 12 marks per family ($1 and $3), and the organization of an "arbitration board" for each society, consisting of 2 physicians, 2 non-medical officers of the society and a lawyer not connected with the society. Extra demands on the physicians are to receive extra remuneration. The medical press is congratulating the Munich physicians for this remarkable victory, beyond their most sanguine anticipations. They urge united organization elsewhere as bound in time to produce equally favorable results. An entire column in the *Münch. Med. Wochft.* and almost two in the *Deutsche Med. Wochft.* are now devoted to warning ads cautioning outside physicians not to go to certain towns "without consulting the undersigned." The latter journal has nine such ads, all subsigned by one of the officers of the *Leipziger Verband.* The importance of the question in Germany may be estimated from the fact that 18 per cent. of the total population of the German Empire are compelled to belong to these sick-benefit societies, nearly ten millions in 1900. This is an average of 347.8 members to one medical attendant, and including the rest of the family, 695.6 individuals to each sick-benefit society physician.

Correspondence.

The Nickname "Allopath."

Baltimore, Oct. 5, 1903.

To the Editor:—Your editorial, with quotation from the *Boston Medical and Surgical Journal,* which shows that among "4,188 persons employed in the profession of medicine" in Massachusetts, "the number of physicians who are willing to answer to the nickname of allopath was 1,432," is startling, even though qualified by the suggestion that in some cases "an ignorant census-taker" may have been responsible for a wrongful classification. This narrow and restrictive misnomer, introduced in contemptuous terms by Hahnemann in his "Organon" in 1810, however repugnant to physicians in good and regular standing, we may charitably assume was not used in an offensive sense by the census-taker of the State Bureau of Labor Statistics. Not only to the illiterate, but, to a large extent, to the educated classes, the word conveys no significance except in the negative way of contradistinction from homeopathy. But inconsiderate assent to such misleading characterization of rational medicine by "physicians who are not sectarians" is altogether another matter. Twenty-two years ago, in an essay on "The Prevalent Misuse of the Term Allopathy," read before the American Academy of Medicine, the writer took occasion to say:

> Well-educated and well-bred people, whom we can not charge with intentional discourtesy, whom we can not suspect of any disposition to wound our sensibility, so habitually use the word in common conversation that there is no hope of escape from the infliction except by revolutionary procedure. But this revolution must begin at home. We must aim the first blow of resistance at the foes of our own household. What only stirs our impatience with the unprofessional offender should provoke active resentment against the sinner in our own ranks. There are too many in the household of faith in the attitude of indolent acquiescence in the misuse of the word in question, and even of tacit acceptance of its implied reproach and its transparent falsity.

Similarly inappropriate and inconsistent in this age of unparalleled activity, progress and achievement, is the term "Old School" physician, which is still encountered in some parts of the country in the profession as well as out of it. What have we to do with the old except so far as it concerns the new? The leaders of thought and action are in the forefront of investigation, and the rank and file are imbued with the spirit of advancement. To apply such epithets as "allopath" and "old school" to the faithful workers who are patiently solving the intricate problems before us, who are emancipating medicine, the science and the art, from the mists and shadows, and widening it into the infinite capabilities of new life and larger liberty, is a form of perversity which is exasperating to say the least. And if, as appears from your significant quotation, there are those among us who do not properly resent the obnoxious "pathy" when applied to the comprehensive range and character of our professional objects and labors, and in whose ears such sophistical terms leave no jarring dissonance, there is evidently room for missionary work within our own ranks. So long as the profession itself submits to or winks at such misrepresentation there can be no terms of compromise, no middle ground of tolerance; all that is left is demand for unconditional surrender.

Charles C. Bombaugh, M.D.

Virginia Medical Society Proceedings.

Roanoke, Va., Oct. 24, 1903.

To the Editor:—I observe in The Journal, October 3, that your reporter of the proceedings of the recent meeting of the State Medical Society of Virginia has got things a little mixed, and I hasten to make the correction: There were charges of various kinds preferred against "seven" of the Roanoke doctors, but it appears that not one of these charges was clearly sustained before the judiciary committee, and I can not understand why your reporter singled out my name and omitted the others. While it is true that when I located in this city three years ago I made a few professional announcements through a newspaper of my establishing a private sanitarium here, giving its location and objects, I fail to see wherein I violated in the least degree the true spirit of the Principles of Ethics, more especially since the Virginia State Medical Society permits business cards and professional announcements of private hospitals to appear in the newspaper.

Bittle C. Keister, M.D.

Queries and Minor Notes.

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

METHODS OF ITINERANT PRACTITIONERS.

Oregon, Sept. 30, 1903.

To the Editor:—Is it not in bad taste, if not a violation of the spirit of the Principles of Medical Ethics, for members of a state medical society to travel over the country, like traveling quacks, staying one day in a place every month, after giving notice through the local newspapers of the time of their coming? J. O.

STATES AND TERRITORIES RECOGNIZING DIPLOMAS.

New York City, Oct. 10, 1903.

To the Editor:—Please give a list of states and territories having no state board for examination of candidates wishing to practice medicine. Can you furnish it or inform me where to apply?

S. G. J.

Answer.—The following states and territories recognize diplomas without requiring examination: Colorado, Kentucky, New Mexico, Nevada and Wyoming (also in one tribal division of Indian Territory). In New Mexico scrutiny of the diploma is very strict and only diplomas of a few of the leading institutions are accepted. In other states, as in Colorado, an examination is required if the diploma is not satisfactory, but the lines are not so closely drawn. We annually publish a little book entitled "Laws Regulating the Practice of Medicine in the Various States and Territories." The last edition is revised to July 1, 1903, and may be had for 30 cents.

PHYSICIAN'S WIFE CHARGED FOR LODGE EXAMINATION.

Wisconsin, Oct. 9, 1903.

To the Editor:—Dr. A and Dr. B have always been on friendly terms. Dr. A is examining physician for an insurance and fraternal order that Dr. B and his wife wish to join. They go to Dr. A for examination, who does not charge Dr. B for his examination, but does charge Mrs. B. Is this in accordance with the Principles of Ethics? X.

Answer.—Sec. 2, Art. II of Chap. II of the Principles of Ethics says: "All practicing physicians and their immediate family dependents are entitled to the gratuitous services of any one or more of the physicians residing near them." This, however, refers to the services of one physician to another or to another's family in case of sickness; the case in point is more of a business transaction, and we see nothing unethical in Dr. A's charging for his services, if he so desires. Few physicians, however, would charge for the services mentioned.

Marriages.

Omar Barton Pancoast, M.D., to Miss Joe Anna Ross, at Baltimore, October 1.

Robert Sherman Kirk, M.D., to Miss Alma Louise Seidler, both of Baltimore, October 1.

John L. Kirkpatrick, M.D., to Miss Maude Smith, both of Los Angeles, Cal., September 30.

Harry Andrews Cotton, M.D., Boston, to Miss Alice Della Keys, at Baltimore, September 27.

Fred C. Blackwelder, M.D., Roswell, N. M., to Miss Mary Tutweiler of Indianapolis, October 7.

Winfield B. Martin, M.D., Freeport, Ill., to Miss Iona MacDonald of Chicago, September 30.

Edward J. Fleetwood, M.D., Wakefield, Neb., to Miss Inez E. Hultquist, at Osceola, Neb., September 16.

Thomas B. Curran, M.D., Tacoma, Wash., to Miss Elizabeth Griggs Butler of Detroit, Mich., September 24.

James Lawton Hiers, M.D., Savannah, Ga., to Miss Elizabeth Meredith Maxwell of Omaha, Neb., October 7.

J. Hamilton Charters, M.D., Gaylord, Mich., to Miss Ethel Louise Chisholm of West Bay City, Mich., September 22.

H. Hayward Street, M.D., Baltimore, to Miss Olivia S. Baldwin of Long Green Valley, Baltimore County, Md., October 1.

W. A. Hemingway, M.D., a medical missionary of Shansi, China, formerly of Oak Park, Ill., to Miss Mary Williams, at Oxford, Ohio, October 1.

Deaths.

Joshua G. Allen, M.D. University of Pennsylvania, Philadelphia, 1856, died at his home in Philadelphia, September 26, from heart disease, aged 73. In 1863 he became visiting physician to the Philadelphia Lying-in Charity and Nurses' Home, which position he filled for thirty years. He was a member of the Philadelphia County Medical Society, Medical Society of the State of Pennsylvania, and the Philadelphia Obstetrical Society.

John H. B. Amick, M.D. University of Pennsylvania, 1876, a member of the Philadelphia Common Council for five years; inspector of drugs in the custom house during Harrison's administration, and during the Spanish-American War major-surgeon of the Nineteenth Pennsylvania Infantry, U. S. V., died at the German Hospital, Philadelphia, September 26, after an illness of ten weeks, aged 52.

Philo D. Patterson, M.D. University of Michigan, Ann Arbor, 1869, some-time president of the Michigan State Medical Society; a member of the American Medical Association, and the oldest practitioner in Eaton County, Mich., died at his home in Charlotte, September 27, from cancer of the throat, after an illness of several months, aged 60.

William H. Thomas, M.D. Medical College of Indiana, Indianapolis, 1876, a member of the faculty of his alma mater for two years, and later one of the founders of and a professor in the Central College of Physicians and Surgeons, died at his home in Indianapolis, September 30, from congestion of the brain, aged 70.

John Green, M.D. Charity Hospital Medical College, Cleveland, Ohio, 1867, a pioneer physician of Council Bluffs, Iowa, died at his home in that place from prostatic disease after an illness of more than a year, September 25, aged 71. He was a member of the Council Bluffs Medical Society.

Basil B. Brashear, M.D. Cleveland Medical College, died from ptomain poisoning at Upper Marlboro, Prince George County, Md., October 2, aged 81. He was a member of the faculty of Cleveland Medical College and chief surgeon of the Thirteenth Army Corps during the Civil War.

Geoige Haven, M.D. Harvard University Medical School, Boston, 1883, instructor in gynecology in that institution; member of the Massachusetts Medical Society, died at his home in Boston, September 27, after a short illness.

Leven Cottingham, M.D. University of Louisville, Kentucky, 1882, member of the Henderson County (Ky.) Board of Health, died at his home in Robards, Ky., September 30, from dysentery, after an illness of ten days, aged 56.

Thomas P. Shepherd, M.D. Cleveland Homeopathic Medical College, 1899, of Cleveland, died at the Huron Street Hospital in that city, September 28, from toxemia following typhoid fever, aged 29.

Benjamin H. Milliken, M.D. New York University, 1863, died at his home in Bowling Green, Ky., after an illness of several weeks.

State Boards of Registration.

COMING EXAMINATIONS.

State Board of Medical Examiners of New Jersey, Trenton, Oct. 20-21.

Illinois State Board of Health, Great Northern Hotel, Chicago, Oct. 21.

Iowa State Board of Medical Examiners, Capitol Bldg., Des Moines, Oct. 21-22.

Louisiana State Board of Medical Examiners, Tulane Medical College Bldg., New Orleans, Oct. 26-27.

Oklahoma Medical Examining Board, Enid, Nov. 10.

Committee of the Connecticut Medical Society, City Hall, New Haven, Nov. 10.

Board of Registration in Medicine of Massachusetts, State House, Boston, Nov. 10-11.

State Board of Health of West Virginia, Point Pleasant, Nov. 10, 11, 12.

Nebraska State Board of Health, Lincoln, Nov. 11.

Medical Organization.

Indiana.

Elkhart County Medical Society.—At the first fall meeting held in Elkhart, September 24, this society adopted the constitution and by-laws which had been so revised as to accord with those of the state and national organizations.

Iowa.

Woodbury County Medical Society.—This was organized, September 25, supplanting the smaller Sioux City Medical Society. There are forty physicians in Sioux City and twenty in the county outside of Sioux City and it is hoped to bring all these into the new society. The constitution and by-laws prepared by the American Medical Association were adopted, and the following officers elected, who will hold office until the regular-election at the annual meeting on January 1: Dr. Guy C. Rich, Sioux City, president; Dr. Charles Rice, Smithland, vice-president; Dr. Francis J. Murphy, Sioux City, secretary; Dr. Frederick A. Powell, Sioux City, treasurer, and Drs. Van Buren Knott, Milton Daily and John R. Savage, all of Sioux City, censors.

Kansas.

Kansas State Medical Society, Second District Branch.—The Southeast Kansas Medical Society, at a meeting in Parsons, formally disbanded, and its members then organized as the Second District Branch of the Kansas Medical Society, which embraces Lyon, Coffey, Anderson, Linn, Greenwood, Woodson Allen, Bourbon, Elk, Wilson, Neosho, Crawford, Chautauqua, Montgomery. Labette, Franklin and Miami counties. The first meeting of the new society will be held in Fort Scott, December 1. By this change the members of the society are made members of the Kansas State Medical Society, which is auxiliary to the American Medical Association. The officers of the new society are: President, Dr. Millard F. Jarrett, Fort Scott; vice-president, Dr. John B. Anderson, Chetopa, and secretary, Dr. George S. Liggett, Oswego.

Louisiana.

Franklin Parish Medical Association.—Franklin Parish physicians met at Winnsboro, September 24, and organized, with Dr. W. W. Lee, president; Dr. Lewis M. Griffin, Wisner. vice-president, and Dr. Charles L. Ramage, Winnsboro, secretary and treasurer.

Minnesota.

Sibley County Medical Society.—This was organized at Arlington, August 25, with the following officers: Dr. David N. Jones, Gaylord, president; Dr. Milo E. Bushey, Arlington, vice-president; Dr. Robert R. Stoner, Winthrop, secretary; Dr. Ward Z. Flower, Gibbon, treasurer, and Drs. W. H. Lord, Henderson, Christ W. Kanee, Arlington, and John J. Langford, Green Isle, censors.

North Carolina.

Rutherford County Medical Society.—Dr. E. C. Register, Charlotte, N. C., met the physicians of Rutherford County at Rutherfordton and organized a county medical society with the following officers: Dr. Theodore B. Twitty, Rutherfordton, president; Dr. Romeo Hicks, Henrietta, vice-president; Dr. Edgar B. Harris, Rutherfordton, secretary and treasurer, and Drs. J. B. Thompson, Cliffdale, T. G. Hamrick, Caroleen, and Charles B. Wiseman, Henrietta, censors.

Texas.

Taylor County Medical Society.—Physicians of the county met at Abilene recently and organized a county medical society with Dr. Bass of the State Epileptic Colony, president; Dr. Luther A. Grizzard, Abilene, vice-president, and Dr. J. B. Thomas, secretary.

Bastrop County Medical Society.—This society was organized at Bastrop, September 24. The following officers were elected: Dr. H. Powell, Luckett, Bastrop, president; Dr. John H. E. Powell, Smithville, vice-president; Dr. Henry B. Combs, Bastrop, secretary and treasurer, and Drs. John H. E. Powell, Smithville, Nosco B. Harris, Redrock, and W. R. P. Thompson, Smithville, censors.

Tyler County Medical Association.—Dr B. F. Calhoun, Beaumont, councilor for the Tenth (southeast) District, met with the physicians of the county at Woodville, and organized a county medical society with initial membership of twelve. Dr. William V. Stewart, Colmesneil, was elected president; Dr. John B. Roberts, Woodville, vice-president; Dr. Dru McMicken, Woodville, secretary and treasurer, and Dr. William P. Chapman, delegate to the state association.

Wisconsin.

Sauk County Medical Society.—The physicians of the county met at Baraboo, September 24, and organized. The following officers were elected: Dr. Charles Gorst, Baraboo, president; Dr. James D. Trumbauer, Loganville, vice-president; Dr. George L. G. Cramer, Baraboo, secretary and treasurer, and Drs. Marshall T. Martin, Merrimack, Frank D. Hulbert, Reedsburg, and John Buehler, Prairie du Sac, censors.

Iowa County Medical Association.—This society was organized at Mineral Point, September 23, with the following officers: Dr. William J. Pearce, Dodgeville, president; Dr. F. M. Bailey, Mineral Point, vice-president; Dr. Simon P. Deahofe, Mineral Point, secretary and treasurer; Dr. Thomas S. Lawler, Cobb, delegate to the state society, and Drs. William J. Pearce, Dodgeville, F. M. Bailey, Mineral Point, and Hugh F. McDonald, Hollandale, censors.

Chippewa County Medical Society.—Dr. E. L. Boothby, Hammond, councilor for the Eleventh District, met the physicians of the county at Chippewa Falls, September 29, and organized a county medical society, with an initial membership of 14. The following officers were elected: Dr. Charles A. Hayes, Chippewa Falls, president; Dr. Robert Cottington, Bloomer, vice-president; Dr. Robert B. Cunningham, Cadott, secretary and treasurer, and Drs. Hugh McCormick, Auburn, Herbert H. Hurd, Chippewa Falls, and Eugene P. Ellenson, Chippewa Falls, censors.

Society Proceedings.

COMING MEETINGS.

New York State Medical Association, New York City, Oct. 19-22.
Congress of State and Provincial Boards of Health of North America, Baltimore, Oct. 23-24.
American Public Health Association, Washington, D. C., Oct. 26-30.
Hawaiian Territorial Medical Society, Honolulu, Nov. 7.
Oklahoma Territory Medical Association, Oklahoma City, Nov. 11.

AMERICAN ELECTROTHERAPEUTIC ASSOCIATION.

Thirteenth Annual Meeting, held in Atlantic City, N. J., Sept. 22 to 24, 1903.

Under the presidency of Daniel R. Brower, M.D., Chicago, this association met in the Hotel Windsor, Atlantic City, its sessions being unusually well attended.

President's Address.

Dr. Brower, in his address, referred feelingly to the death of Dr. Robert Newman, a very prominent member and an officer, and the association passed resolutions testifying to the esteem in which he was held and the loss sustained in his death. Dr. Brower congratulated the association on the active interest being taken in electrotherapy, but he called attention to the ignorance of many practitioners concerning this agency, and urged that, in view of the wide use which it will soon receive, knowledge of the principles of the methods should be widely disseminated. Fundamental facts that have been established by expert experimentation should be known to all to prevent errors and useless research. Dr. Brower suggested that the terms "faradism," "galvanism" and "franklinism" should give way to scientific nomenclature.

Election of Officers.

The following officers were elected: President, Dr. A. D. Rockwell, New York; vice-presidents, Drs. Willis P. Spring, Minneapolis, and W. W. Eaton, Danvers, Mass.; treasurer, Dr. Richard J. Nunn, Savannah, Ga.: secretary, Dr. Clarence E. Skinner, New Haven, Conn. The next meeting will be held in St. Louis, Sept 13 to 16, 1904.

Dr. Francis B. Bishop said that he thought he had proved that the high frequency current could be made to penetrate glass and transmit metallic and liquid substances. He described his experiments and in the discussion the reliability of his deductions was questioned by several.

Dr. William J. Herdman, Ann Arbor, Mich., made a report for the committee on constant current generators and controllers.

Dr. Alfred W. Baylis, Buffalo, spoke of the need for special preparation for electrotherapy as a field of work, and compared the work done here and in the hospitals abroad.

The Effects of the Secondary Static Currents in Removing Albumin and Casts from the Urine.

Dr. Boardman Reed, Philadelphia, read this paper, stating that it was common to find hyaline casts and albumin in the urine of patients who had been ill for some time with gastro-intestinal disorders, yet this form of renal affection was so amenable to treatment that he looked on it as an autotoxic nephritis dependent on indigestion Following the lead of Dr. A. D. Rockwell he had subjected 18 such cases during the past year to electrical treatment, for the most part with the static wave current. Urinary analyses made before and after treatment demonstrated that such treatment exerted a distinct physical influence. Of the four cases reported in the paper, the albuminuria had been successfully controlled by static electricity.

DISCUSSION.

Dr. A. D. Rockwell cautioned against too much optimism with regard to this mode of treatment, stating that it was only occasionally that one met the mild forms that were suitable for such treatment. He believed that electricity acted beneficially by reducing congestion and increasing the blood pressure in the glomeruli.

Dr. William Benham Snow remarked that the wave current would act just as beneficially in these cases as the static induced if one took the precaution to use a sufficiently great spark gap, say four to six inches.

Dr. G. Betton Massey detailed an interesting case of glycosuria which he had controlled, so far as the glycosuria was concerned, by the use of static electricity.

Dr. A. D. Rockwell, New York, gave a paper presenting some theories concerning the action of electricity on the neurons.

X-Ray and Light in the Treatment of Tuberculosis.

Dr. Russell Herbert Boggs, Pittsburg, in this paper was of the opinion that these therapeutic methods were entitled to first place as adjuvants in the treatment of tuberculosis whereever located. He preferred to use a medium low tube with a coil, giving exposures of ten minutes on alternate days. With the static machine the treatment was more difficult and the dosage more uncertain. The tubes showed great individual variations, but the fluoroscope seemed to him to be the best test of the quality of tubes.

DISCUSSION.

Dr. Charles R. Dickson, Toronto, thought he had obtained fairly good results with the static machine.

Dr. William B. Snow said that if the static machine were operated so as to secure a sufficient volume of x-rays the results would be just as good as with the coil. He had proved the utter fallaciousness of the fluoroscopic test, and was, therefore, surprised to hear the author state that this was a better index of the quality of an x-ray tube than the spark gap.

Dr. Robert Reyburn, Washington, D. C., advanced the theory that the beneficial action of the x-ray in tuberculosis and cancer was due to the formation of an inflammatory product around the morbid cells, thus preventing further infection.

Dr. T. A. Pease reported a case in which he had successfully treated tuberculous glands of the neck by means of static electricity.

Dr. Francis B. Bishop agreed with the reader of the paper that, as a rule, better results were obtained with the coil, for, in order to secure good results with the static machine it must be run at very high speed in connection with a high vacuum tube. One could not get the same volume of current through the tubes with the static machine as with the coil. The speaker then reported three cases of tuberculosis which had apparently been cured by means of a convective discharge from "a cage" directed on the shoulders and chest. He could not accept Dr. Reyburn's theory, because it was known that if too long exposures were made at first there was great danger of causing general infection.

Dr. George Z. Goodell, Salem, Mass, said that after three months' treatment of a case of tuberculous adenitis of the neck with a current from the Kinraide coil and a spark gap of three inches, he was unable to observe any improvement.

Electricity in the Treatment of Chronic Deafness.

Dr. George Z. Goodell, Salem, Mass., presented his experience and those of others who had replied to his circular letter. Several had reported that a mild interrupted current relieved the tinnitus, but better results seemed to be obtained by the use of the continuous current with the positive pole to the ear. The exact value of electrolysis of the eustachian tube was not yet determined.

Employment of Static Electricity in the Treatment of Nervous Diseases.

Dr. William Benham Snow, New York, said that there were few nervous diseases that were not associated with inflammatory processes and failure of nutrition. Such conditions were best met, in his opinion, by the use of the wave current. In acute neuritis he employed as long sparks as possible along the affected nerve, and in chronic neuritis the sparks were applied over the area in which they caused the most pain. Excellent results could be obtained in the very early stages of anterior poliomyelitis from electrical treatment.

DISCUSSION.

Dr. R. J. Nunn, Savannah, Ga., spoke of the therapeutic possibilities of radium, and expressed the belief that all electrical currents presented vibrations, and that the lower vibrations simply served as diluents of the higher ones.

Dr. Charles O. Files, Portland, Me., was of the opinion that the curative action of electricity was dependent on its ability to relieve all forms of congestion.

A Year's Work in Electrotherapy.

Dr. Laura V. Gustin-Mackie, Attleboro, Mass., read this paper, which embodied a clinical experience of 125 cases. She spoke of the great relief that she had observed from the use of electricity in anemic women suffering from ovarian pain and various pelvic disturbances.

Electrical Treatment of Trachoma and Corneal Opacity.

Dr. Margaret A. Cleaves, New York, presented in this paper the history of a severe and neglected case of trachoma that she had successfully treated by zinc electrolysis. During a period of 3½ months she gave 37 electrical applications, using a current of 2½ milliamperes for two minutes at each sitting, and an indifferent of 11 square inches at the nape of the neck. Improvement was noted within ten days. The boy had been discharged cured in June, 1896, and in October of the same year treatment of the corneal opacity was begun, using cathodal electrolysis and one milliampere of current for from one to three minutes three times a week. The boy now has a good position in the business world, whereas but for the treatment he would have become a public charge.

The Successful Treatment of Eighteen Cases of Granular Lids by the X-Ray and High Frequency Vacuum Electrodes.

Dr. Albert C. Geyser, New York, had made exposures of four or five minutes every other day for two or three weeks, and had then used the high frequency current to improve nutrition.

Exophthalmic Goiter and Its Rational Treatment.

Dr. Francis B. Bishop, Washington, D. C., presented this paper on Wednesday morning. He believed that the early and continued use of the corset was a prominent factor in the etiology of this disease, and that, as a part of the treatment, it was highly important to remove all pressure from the abdomen and secure deep breathing. It was also essential that these persons should have an abundance of rest and of nitrogenous food. Medication had proved a delusion and a snare, but much benefit resulted from electrical treatment. He made use of the continuous current, gradually increased up to the point of toleration, and regulated in accordance with its effect on the pulse. A large sponge electrode should be connected with the positive pole and placed high up on the neck, and two sponge electrodes, connected with the negative pole, should be placed on either side of the neck over the pneumogastric nerves and the thyroid. After such an application for ten or fifteen minutes the patient would be quieted, and the current should then be applied directly to the gland for the same length of time, the sittings being on alternate days.

Dr. T. A. Pease, Norwood, N. Y., claimed much for his method, which consisted in blanching the skin by the cataphoric use of a 4 per cent. solution of adrenalin, and then applying the high frequency current with a wooden electrode.

Dr. A. D. Rockwell, speaking from a long and large experience with this affection, advised the use of the galvanic current in considerable strength, applying it by means of large clay electrodes over the ciliospinal center and the solar plexus.

Dr. William W. Eaton, Danvers, Mass., had had a favorable experience by practically the same method as outlined by Dr. Rockwell.

Dr. Willis P. Spring, Minneapolis, asked for experience as to the effect of using the fluoroscope on the operator's eyesight.

Drs. W. J. Herdman and C. R. Dickson said that it caused marked deterioration of the vision.

Dr. Loring, Boston, said that a simple and efficient means of protecting the eyes was by attaching a thick piece of glass behind the fluoroscopic screen.

Dr. R. J. Nunn suggested that this glass shield should be selected only after testing its opacity to the *x*-ray.

Zinc-Mercuric Cataphoresis of Tuberculous Glands.

Dr. G. Betton Massey, Philadelphia, described his method, and exhibited two patients that had been so treated. He employs for the active electrode a sharpened sliver of amalgamated zinc, which, except for the first treatment, is insulated nearly to the tip. The first puncture is made with a Hagedorn needle. A current of one to three milliamperes is allowed to flow for half an hour, and the treatment is repeated three times a week. It was worthy of note that not only is the local process cured but the patient's general condition is decidedly improved.

A Plea for Electrotherapeutics Proper.

Dr. William J. Herdman, Ann Arbor, Mich., urged the association to resist the temptation to run after fads and indulge in borderline studies. He rehearsed the manifold therapeutic properties of the various currents.

Radiant Light Baths in the Treatment of Neuroses.

Dr. Thomas D. Crothers, Hartford, in this paper, was even more enthusiastic than in his paper of one year ago. Increasing experience showed that not only was the radiant light bath more acceptable to the patient, but observations on the pulse, temperature and influence on the secretions proved the superiority of the light bath.

Dr. Charles H. Shepard, Brooklyn, advocated the use of electricity in conjunction with the hot-air bath.

Dr. W. J. Herdman warmly seconded this suggestion, arguing that the stimulant effect of the induced current was an admirable corrective of the debility necessarily produced by the hot-air bath.

Radium, with a *Preliminary* Note as to Its Therapeutic Uses in Cancer.

Dr. Margaret A. Cleaves, New York, said that there were three distinct types of rays emanating from radium, viz.: the α-rays, representing the major portion, and presenting some of the characteristics of the *x*-ray; the b-rays, which are much longer and correspond to the cathode rays, and the r-rays, which have a still higher rate of vibration. As one of the pioneers in the therapeutic use of radium, Dr. Cleaves reported two cases that she had treated with the aid of one gram of radium of 7,000 radioactivity, i. e., having 7,000 times the radioactivity of uranium.

The Present Status of X-Ray Therapy in the Management of Cancer.

Dr. Clarence E. Skinner, New Haven, Conn., read this paper, saying that the *x*-ray was one of the best means for the treatment of malignant disease, because as large a proportion of cures and as small a proportion of recurrences during a given period had been obtained with it as with any other means. It was now generally believed that in the early stages malignant disease should be removed by the knife, and that this should be followed by a thorough course of *x*-ray treatment. Whether or not, as some seem to think, the *x*-ray actually hastened metastasis could not be stated positively, but the evidence seemed to be against such a view.

Report of Committee on Current Classification and *Nomenclature.*

Mr. William J. Jenks, E.E., presented this report on Thursday, urging the substitution, so far as possible, of the terms "constant current" for "galvanic current," and "induced" or "magnetic induced current" for "faradic current."

Perineuritis.

Dr. A. W. Baer, Chicago, pointed out the fact that an electrical application constituted a good means of *differentiating* between facial neuralgia and suppuration at the root of a tooth.

Other papers read were: "Clinical Report on the Use of the X-Ray in Lesions of the Spinal Cord," by Dr. C. W. Daniels, Savannah, Ga.; "Currents of High Frequency, Apparatus and Therapeutic Uses," by Dr. F. G. DuBose, Selma, Ala.: "The Roentgen Ray as an Aid in Diagnosis," by Dr. Herman Grad, New York; "A Plea for an Accurate and Scientific Method of Roentgen Ray Treatment," by Dr. M. K. Kassabian, Philadelphia.

Cases were also reported: Eight of advanced cancer, by Dr. W. W. Eaton, Danvers, Mass.; one of asthma with fibroids and pelvic adhesions, by Dr. C. A. Covell, Syracuse; several of malignant growths, by Dr. M. M. Johnson, Hartford, Conn.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Sixteenth Annual Meeting, held in Chicago, Sept. 22-24, 1903.

(Concluded from page 925.)

Shortening of the Round Ligaments by the Blunt Hook Method.

Dr. H. W. Longyear, Detroit, described this method as follows: "The location of the internal ring is determined by finding the point of crossing of Poupart's ligament and femoral artery, as the ring is situated immediately back and above it. Beginning half an inch inside this point and cutting toward the pubic end parallel to Poupart's ligament, a one-inch incision is made through skin, fat and superficial fascia. Eye retractors and blunt hooks are then used, the tissues separated down to the aponeurosis of the external oblique, which is thus laid bare to the eye, to the extent of about one square inch. A puncture is now made through this aponeurosis one-quarter of an inch long, situated just above Poupart's ligament and to the back of the square inch of cleared aponeurosis, and through this the blunt hook is inserted and the ligament drawn out, usually with more or less of the fat of the canal along with it. The ligament is isolated and its fibrous attachments stripped back toward the internal ring with blunt-pointed dressing forceps, the ligament drawn out to the necessary length, an aneurism needle passed through the aponeurosis and the loop of ligament drawn through this, folded back on itself, and, with one stitch of kangaroo tendon, made fast, the suture embracing in its grasp the edges of the aponeurosis where the ligament first passes through it, half of the ligament at the same point and half on each side of the loop that is folded back on it. The skin is then closed by a running catgut suture, and dressings applied. The operation is applicable only to cases of mobile uteri without diseased appendages, in which cases it is an ideal procedure, or to cases in which adhesions may have been previously broken up by abdominal section."

Of 58 cases operated on by this method, late examination has shown the uterus to be in normal position in 48; 6 other cases were normal two to five months after operation, and were then lost sight of; there was 1 partial failure and 2 complete failures.

DISCUSSION.

Dr. Edward J. Ill had done this operation twelve times and, while the uteri remained in place, the painful scars made trouble.

Dr. Albert Goldspohn, Chicago, said the objections to the simple Alexander operation were that it was not thorough and it did not fulfill all the indications. He then mentioned his own method.

The Need for Study of the Symptoms of Perforation in Typhoid Fever, and the Life-Saving Possibilities of Early Operation.

Dr. W. D. Haggard, Nashville, Tenn., stated that only about three hundred cases of operation for intestinal perforation in typhoid fever had been reported since the first case in 1884. Granting that this represented only one-half or one-fourth, the number is pitifully meager when it is computed that twenty-five thousand persons die yearly in the United States from perforation and peritonitis in typhoid fever.

He made a plea for an early diagnosis and an attempt to save a part of this appalling number. On a basis of a possible 30 per cent. recovery, which was shown to have been attained in the reported cases, 7,500 lives might be preserved yearly by prompt operation. The difficulty lies in making an early diagnosis. The abdomens of typhoid cases should be exposed and carefully examined daily. No abdominal symptom or sign should be considered trivial. Pain was usually the first note of alarm—sudden, severe, colicky and persistent. Exploratory laparotomy, under cocain if necessary, was earnestly urged as a diagnostic measure in suspicious but doubtful cases. A plea was made for recognition and interference with the early and mild symptoms. The surgeon should stand in close relationship with the physician in all typhoid cases, as is done in appendicitis.

Dr. Haggard reported three successful operations and described the technic.

DISCUSSION.

Dr. John B. Murphy had operated on two cases of peritonitis with typhoid fever without perforation. Both recovered.

Dr. Robert T. Morris said the general practitioner must feel impelled to call a surgeon to his aid in almost any case of typhoid, not necessarily for operation, but for consultation. In a case of simple peritonitis from extension of the infection, the patient should be relieved by opening the abdomen and draining. Hemorrhage in typhoid fever cases is dangerous and has not received the attention it deserves. He predicted that in the next decade hemorrhage in typhoid cases would be treated surgically.

Dr. Willis G. McDonald said that the classical description presented in text-books of intestinal perforation in typhoid fever was misleading. It was rather a fine description of impending death.

Dr. Lewis S. McMurtry, Louisville, Ky., delivered the "Memorial Address on Dr. William E. B. Davis of Birmingham, Ala.," paying a high tribute to an earnest, honest, able and intense man, who, dying before the age of forty years, had done the work usually encompassed in a good long life.

Some of the Sources of the Disappointments of the Surgeon.

This was the title of the president's address, delivered by Dr. L. H. Dunning, Indianapolis. He urged the importance of not making an unwarrantedly favorable prognosis. New methods need the test of time ere there is too much dependence placed on them. The most nearly perfect surgeon is one who orders his life with the utmost care, but disappointments in greater or less degree will come to all surgeons, be they ever so successful, for it seems to be the natural order of things that contrasting or antagonistic elements shall exist side by side. The man who becomes despondent and inactive because of this is the weak man. The strong man will endeavor to magnify the good and crush out the evil. The surgeon's hope should be to eliminate every preventable source of failure and, when failures do come, to make of them task masters compelling the way to better things.

The Rational Treatment of Postpartum Infections of the Uterus.

Dr. D. Tod Gilliam, Columbus, Ohio, after discussing the bacteria concerned, called attention to the fact that a recently delivered uterus is an excellent culture ground for infection, being filled with the juices of disintegration and spilled blood. The mortality would be appalling were it not for the safeguards. These are: 1. Autosterilization of the genital tract. 2. The protective epithelium. 3. The protective leucocytes under the epithelium. The germ of Döderlein is the principal agent in sterilizing the genital tract; hence irrigation before or after labor is harmful, because it washes this germ away and does not entirely rid the tract of pathogenic germs. The normal death rate of puerperal infection is about 1 per cent., but after curettage it amounts to 20 per cent. The sharp curette is especially dangerous, as it not only fails to remove the germs, but destroys the protective barriers. As it is impossible to say that streptococcus infection is not present in any case, the only safe way is to eschew the sharp curette entirely in puerperal infection. Curettage is only permissible where there is known to be fetal debris in the uterine cavity, and where there is reason to believe no streptococci are present. For this the finger or dull curette with stiff handle should be used. Flushing, if done at all, should be done with every precaution against infection. The patient should be on a table, under a good light, the vulva and vagina cleansed, the latter with 5 per cent. creolin in liquid green soap, mopped, dried and retractor introduced; the cervix grasped, drawn down and steadied with forceps; the cervical canal wiped out with gauze and bits of membrane picked off with forceps. Gently introduce irrigator and flush. If pulse and temperature drop, repeat daily or oftener, otherwise discontinue.

"Penetrating and Perforating Gunshot and Stab Wounds of the Abdomen" was the title of a paper by Dr. John Young Brown, St. Louis, which went fully into the literature and reported cases.

The Use of the Stem Pessary for Infantile Uteri, Scanty Menstruation, Amenorrhea and Dysmenorrhea.

Dr. J. Henry Carstens, Detroit, explained the theory that since weak or poorly developed muscles can only be strengthened by constant exercise, the only way to exercise the uterine muscles is to introduce something into the uterus, and the constant tendency to expel the contents will enlarge the muscles and develop the uterus. It is absolutely essential that no pelvic trouble, either chronic or latent, exists and the diagnosis must be perfect. He uses the Chapman hard rubber pessary and leaves it in from six months to two years. He cited cases showing relief secured by this method.

"Tuberculosis of the Female Genitalia and Peritoneum" was the title of a paper by Dr. John B. Murphy, Chicago, which considered in detail all the varieties.

Movable Kidney with Secondary Cyst Formation, Resembling Ovarian Cyst.

Dr. Rufus B. Hall, Cincinnati, argued against the almost universal practice not to interfere until compelled to do so. He contends that if the cases of movable kidney are operated on early for fixation of that organ, it will save structural changes and give great relief from invalidism. Movable kidneys, if neglected, may undergo cyst formation or develop hydronephrosis or pyonephrosis, as in the cases reported.

Dr. N. Stone Scott, Cleveland, Ohio, read a paper on "Surgery of the Ileocecal Valve for Malignant Disease," and reported cases.

The Choice of Methods for Closing the Parietal Abdominal Incision.

Dr. Edwin Ricketts, Cincinnati, thought that the through-and-through sutures of silkworm gut with the midway closure of the peritoneum with interrupted sutures of fine silk is nearer to the ideal method than any other. Silkworm gut is actually impervious to any attacks of infection.

Supravaginal Amputation for Fibroid Tumors.

Dr. Herman E. Hayd, Buffalo, N. Y., wished to place himself on record as believing that the supravaginal amputation for necessarily operable fibroids meets nearly every indication and has been applied to every conceivable kind of tumor, with short or long pedicle, tumors growing deep into the pelvis or out into the broad ligaments, and with results which make it a clean and ideal piece of surgery. It is the operation of choice, excepting in those cases where drainage must be provided for or where the cervix, for various other reasons, should be removed.

The Pelvic Musculature in Disease.

Dr. Hugo O. Pantzer, Indianapolis, read this paper, narrating two extreme cases in detail. In one, during a subperitoneal hemorrhage involving both broad ligaments, the muscles of the pelvic floor were in spastic, painful contraction. This symptom has been found available in differential diagnosis between pelvic hematoma and hematocele. In the second case similar contraction was observed in a case of gangrenous appendicitis.

Veratrum Viride in Surgical and Obstetrical Practice.

Dr. Charles L. Bonifield, Cincinnati, in this paper said that veratrum stimulates the liver, kidneys, skin and salivary glands, lowers temperature and relieves inflammatory pain by its effect on the circulation. These properties make it valuable in localized peritonitis and in salpingitis. In appendicitis the appendix should, if possible, be removed during the first twenty-four hours. When this can not be done the Ochsner treatment should be given, supplemented by the hypodermic administration of veratrum. In the treatment of postoperative peritonitis, after the very important free purgation has been secured, the heart, by its exceedingly rapid action, may exhaust itself before convalescence can be established. In this condition there is no drug equal to veratrum. It is superior to strychnin or digitalis because, while they may stimulate the heart to act for a time with renewed vigor, veratrum makes the work of the heart easier and gives it a chance to rest between beats.

Veratrum has been used for thirty years in the treatment of eclampsia by a considerable number of practitioners without a fatality, and every one who has given it a thorough trial acknowledges it to be superior to chloroform, morphin or any other drug in general use.

Ovarian Grafting.

Dr. Robert T. Morris, New York, detailed some progress in experimental work and then took up the use of the procedure in human subjects. At the present time he had reached this point: (1) If the ovaries and oviducts have to be removed *en masse*, the patient will suffer from a precipitate menopause if she is left without an ovary. If a piece of ovary be taken from this patient or from another operated on at the same time, put in a salt solution at a temperature of 100 F., and then grafted in the broad ligament, that patient will continue to menstruate and to have the comfort that goes with the possession of an ovary. But if an ovary be grafted from another patient, at the end of a year perhaps the grafted ovary will have practically disappeared and her menopause begin. If a woman be grafted with a piece of her own ovary, the menopause may not begin for some years afterward, or until the normal time for it. This is a practical point, he said, which surgeons can apply in their everyday work. (2) A patient grafted with a piece of her own ovary may become pregnant if a tube and oviduct on one side be left, or part of it on one side. A patient grafted with a piece of an ovary from another patient may become pregnant, if pregnancy occurs quickly. (This has occurred twice with rabbits during his experimentation.) But pregnancy must occur before degeneration has gone to such a point that the ova are not well formed. He expected to obtain further good results.

DISCUSSION.

Dr. D. T. Gilliam, Columbus, Ohio, inquired what kind of suture was used.

Dr. Morris replied that he uses the very smallest No. 1 catgut.

Dr. John B. Murphy asked how Dr. Morris places the ovary in the abdomen. He said he had removed one ovary in connection with a fibroid tumor and transplanted it into a monkey. He split the ovary, transplanted half of it subperitoneally and the remaining half intraperitoneally. He removed it thirty-two days afterward, and sent it to the pathologist, without any statement as to what was done, and asked for an opinion as to the condition of the ovary. The pathologist reported that the ovary was absolutely normal in every respect.

Dr. Herman E. Hayd said that if the processes of ovulation and menstruation will go on whether an ovary be transplanted intraperitoneally or extraperitoneally, there will be infinitely less danger if the piece of ovary was transplanted into the abdominal wall. In other words, one need not worry about his technic if menstruation will go on just the same.

Dr. Murphy said the transplantation of an ovary intraperitoneally is fatal. The peritoneum will eat rapidly everything brought in contact with it.

Dr. Albert Goldspohn said that he had not utilized ovarian tissue that had been completely severed from its original connection, fearing that it might seriously interfere with function.

In one case he used only a slight vestige of an ovary. It looked like a mass of denuded raw connective tissue, although there was ovarian tissue in it. The remnants were poorly connected with a little bit of connective tissue. In another instance there was more connective tissue. He swung the fragment around to the nearest accessible healthy peritoneal surface and stitched it with fine catgut. Both women menstruated; one for two months and the other regularly ever since. The latter is enjoying very good health. There seems to have been no difference caused in the sexual appetite.

Dr. James F. Baldwin asked if the ovarian transplantation is to prevent the menopause, and not with the idea of future pregnancy, this being of minor importance, why may we not, in a patient who has been operated on several months before, make an incision down to the peritoneum, make the little pocket and drop in the healthy ovary from patient No. 2, and close the incision? Frequently an ovary may be embedded in the densest adhesions in the pelvis, the woman has gone on menstruating, but has not conceived. It seemed to him that an ovary is in the peritoneal cavity only for pregnancy.

Dr. Morris said that the corpus luteum controls menstruation. So long as a corpus luteum is formed in a grafted ovary the patient will menstruate. When a corpus luteum is not developed then the patient ceases to menstruate. This explains why menstruation is more temporary when an ovary is transplanted from another person; it degenerates after a time, being foreign to the organism into which it is transferred. Dr. Morris said it was necessary to get a lymph circulation in order to keep the ovary alive. Were it not for this lymph circulation the ovary would become absorbed, because the peritoneum will digest beefsteak. In a few days a complete ovarian circulation is established. He has seen pretty good sized arteries surrounding a grafted ovary, but not actually in it. A nurse who had had her ovaries removed two years previously, and who had ceased menstruating, menstruated regularly for several months after an ovarian grafting. A young woman with an infantile uterus, after receiving an ovarian graft, menstruated for a year. The graft then became absorbed and menstruation ceased. This is a new line of work, and while there may be some disappointments, practical points are being brought out that are going to be of great value.

Dr. F. F. Simpson, Pittsburg, Pa., read a paper entitled "A Consideration of Combined Ectopic and Intrauterine Pregnancy, with Report of a Case." He analyzed the case and said that the common errors in diagnosis have been (a) the recognition of the uterine pregnancy and mistaking the ectopic for an inflammatory condition or neoplasm; (b) the recognition of ectopic and overlooking the uterine pregnancy. Accompanying the paper is a table of 118 cases from literature.

Emergency Abdominal Surgery at the Patient's Home—A Demonstration.

Dr. Willis G. MacDonald, Albany, said that operation in the patient's home becomes a necessity in many conditions—as in intestinal perforation—and the surgeon must be prepared to treat such emergencies without delay and yet under aseptic conditions. He discussed the various details.

Ectopic Pregnancy.

Dr. Henry D. Ingraham, Buffalo, reported twelve cases operated on. After careful serial microscopic examination he was inclined to think that previous inflammation of the tube had but little to do in causing ectopic pregnancy. The only condition discovered that could be the cause was the case of constriction of the tube, the cause of which at present was unknown.

PENNSYLVANIA STATE MEDICAL SOCIETY.

Fifty-third Annual Meeting, held at York, Sept. 22 to 24, 1903.

(*Continued from page 926.*)

Streptococci and Antistreptococcus Sera.

Dr. D. H. Bergey, Philadelphia, read a paper in Section A on September 24, in which he stated that the recent studies with the antistreptococcus sera appear to demonstrate that such streptococci can not be regarded as the etiologic factors of such diseases as acute articular rheumatism, scarlet fever and smallpox, as had been claimed by different investigators.

Some Points on Appliances for Bacteriologic Work by Busy Country Doctors.

Dr. A. C. Wentz, Hanover, spoke extemporaneously, addressing some very valuable remarks to the country practitioner. He exhibited a number of valuable devices for the office which is not provided with a laboratory.

The Necessity for the More Careful Instruction of Medical Students in the Diagnosis of Preventable Diseases.

Dr. Benjamin Lee, Philadelphia, felt that the tendency with both student and instructor was to devote too much attention to therapeusis and not enough to diagnosis. The large increase in diphtheria he believed largely due to the failure of physicians to differentiate between this condition and follicular sore throat or tonsillitis. The same was remarked of scarlet fever. In smallpox lies the greatest importance of early diagnosis. Students should be compelled to study all these diseases.

DISCUSSION.

Dr. J. M. Anders agreed with the above statements and cited the fact that in Philadelphia, through the courtesy of Dr. Welch and of the Board of Health of Philadelphia, the students of the various medical colleges have abundant opportunity to observe this class of diseases in the Municipal Hospital.

Dr. Seneca Egbert emphasized the value of personal observation of these diseases. He stated that the Philadelphia students are required to release the city and the board of health from liability in case of infection, and are required to disinfect their persons before leaving the wards.

The Effect of an Improved Municipal Water Supply on the Prevalence of Enteric Diseases.

Dr. J. Frank Small, York, gave statistics and urged that efficient filtration of a municipal water supply has a decided effect in lessening the prevalence of enteric disease.

DISCUSSION.

Dr. Seneca Egbert believed that the demonstration given by Dr. Small should be repeated in every city in the state. He felt that the people do not appreciate the need of pure water.

Dr. D. H. Bergey felt that if the trouble were taken to make a detailed investigation, other sources of infection would be found in every case of typhoid fever, e. g., milk, etc.

Dr. J. V. Kelly, said that in 52 cases in the Twenty-first Ward, 27 were traced to one milkman.

A Contribution to the Clinical Study of Cerebrospinal Meningitis.

Drs. Thomas C. Ely and J. J. Snyder, Philadelphia, reported a series of 23 cases, sailors from the U. S. Training Ship *Minneapolis*. A notable feature was the vagueness of symptoms in some instances. Only in epidemics, they stated, would these cases have been classified, and the fact leads to the query whether sporadic cases are not often overlooked, just as doubtless cerebral pneumonias and cerebral typhoids are improperly classified as sporadic cases of cerebrospinal meningitis.

DISCUSSION.

Dr. A. O. J. Kelly, Philadelphia, called particular attention to the toxic nature of some of the symptoms. He hoped that in the future it would be possible to separate similar pathologic lesions of diverse etiology.

A case of "Aneurism of the Left Subclavian Artery Treated by Wiring and Electrolysis" was reported by Dr. Judson Daland, Philadelphia. Death occurred in 20 days. Dr. Daland believes that this operation is worthy of trial when medical treatment fails, and that the percentage of success will be greatly increased if the operation be not performed as a dernier resort.

Typhoid Fever.

Dr. L. B. Kline, Catawissa, called attention to the increasing ravages of typhoid fever. Comparison with other acute and infectious diseases shows a higher number of cases and a larger [illegible] for typhoid [illegible] He approves of the maintenance of the intestinal tract in an aseptic condition. Coal-tar products should be interdicted.

DISCUSSION.

Dr. A. O. J. Kelly stated that when there were severe toxic effects with great exhaustion, diminution in the urine, etc., the greatest benefit was to be derived from hypodermoclysis. Those cases not so profoundly toxic are given the greatest benefit by enteroclysis. He emphasized the great value in toxic conditions of normal salt solution.

The Need of a Ward in the General Hospitals for the Treatment of the Mildly and Curably Insane.

Dr. H. W. Rhein, Philadelphia, in this paper said that many cases of mild and incipient insanity which can not be treated at home should, instead of having to go to an insane asylum, be treated in a special ward in the general hospital, under the care of an alienist, who should be a member of the staff of the hospital.

The Dietetic Treatment of Chronic Nephritis.

Dr. J. M. Anders read this paper, stating that a dietary is inadequate if it fails to meet the requirements of nutrition plus the loss of albumin. Proper diet is vital. To lessen albuminuria at the expense of the quality of the blood and general nutrition is very unwise. He allows red meats and fats and butter (except in obesity). Whole milk should be a considerable portion of the diet. Meats should be somewhat restricted, while fruits and green vegetables and rice may be given rather freely. He emphasized the fact that the normal daily physiologic quantity of food is required, which is practically 110 to 130 grams of albumin, 350 to 400 grams carbohydrates, 75 to 110 grams of fat, 2,500 to 3,000 grams of water, and 18 to 30 grams of inorganic salts. The importance of carefully recording the bodily weight of the patient is also emphasized, and systematic blood examinations are urged.

DISCUSSION.

Dr. Thomas D. Davis, Pittsburg, said he had been successful in giving milk in a cup instead of a tumbler to patients, who feel that they can not take milk, and the addition of some vanilla and a bit of ice rendered the milk more agreeable.

Dr. John H. Musser reported a case of typhoid fever seen in relapse, not operated on because of the condition of the patient, who afterward recovered. This was discussed by Drs. W. J. Middleton, F. V. Swing and R. H. Gibbons.

Symposium on X-Ray Therapy.

At the Wednesday morning session of Section B Dr. George W. McNeil, third vice-president, presiding, a paper on "X-Ray, Light and High Frequency Electricity" was read by Dr. Russell H. Boggs, Pittsburg, in which he gave a detailed consideration of the whole subject.

"Utility of the X-Ray for the Treatment of Chronic and Malignant Diseases of the Skin and Superficial Tissues" was read by Dr. Samuel H. Heller, Lancaster, who believed that deleterious results are due to improper technic and detailed some of his own cases.

"Roentgen Rays as a Palliative in the Treatment of Cancer" was the title of a paper by Dr. C. L. Leonard, Philadelphia. He advocated this method postoperatively and in inoperable cases. He emphasized the value of perfect technic and credited many of the failures to improper application.

Dr. Mihran K. Kassabian, Philadelphia, read "Roentgen Rays in Therapeutics," a thorough presentation of the subject. He recommended the preservation of careful statistics of all cases treated.

DISCUSSION.

These papers were discussed by Dr. Taylor, Philadelphia, who reported a case, and by Dr. Lewis H. Taylor, Wilkesbarre. Dr. Leonard said he had secured excellent results in the treatment of neuralgia and neuralgic headaches.

"Some Problems in Surgery" was read by Dr. George D. Nutt, Williamsport.

Dr. William H. Beach, Pittsburg, read a paper on "Proctocolitis, with Special Reference to Treatment." He gave in detail the diet and medication advised, and felt that surgical relief should be resorted to only in extreme cases. In the discussion, Dr. John G. Clark, Philadelphia, recommended the method of Weir of draining the colon through the appendix.

(To be continued.)

COLORADO STATE MEDICAL SOCIETY.

Twenty-third Annual Session, held in Denver, Oct. 6 to 8, 1903.

The beneficial effect of the recent reorganization made itself manifest by a large attendance of members, both from the city of Denver and from the counties all over the state. From the point of numbers and enthusiasm it was the most successful meeting ever held in the state. The constitution was so amended that only members of county societies may hereafter become members of the state society. The section referring to membership of graduates from sectarian colleges was amended by inserting the following proviso: "and who is not affiliated with a sectarian college or society." Resolutions were passed to request President Roosevelt to appoint a physician on the Panama or Nicaraguan Canal Commission.

The most far-reaching action taken by the society was the resolution to establish a state medical journal. The editor was elected, Dr. Edward Jackson, who was at one time the editor of the *Pennsylvania State Medical Journal.*

The election of officers resulted as follows: President, Dr. Thomas H. Hawkins, Denver; vice-presidents, Drs. J. Tracy Melvin, Sagauche, A. C. Friedman, Colorado Springs, and R. F. Graham, Greeley; delegates, Drs. Sol. G. Kahn and W. A. Jayne; councilors, Drs. C. F. Gardiner, Colorado Springs, and S. D. Hopkins, Denver; secretary, Dr. J. M. Blaine, and treasurer, Dr. W. E. Rothwell; publishing committee, Drs. Edward Jackson, Robert Levy and S. E. Solly.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Twenty-ninth Annual Meeting, held at Memphis, Oct. 7 to 9, 1903.

The following officers were elected for the ensuing year: President, Dr. Hugh T. Patrick, Chicago; vice-presidents, Drs. Bransford Lewis, St. Louis, and George W. Cale, Springfield, Mo.; treasurer, Dr. Thomas Hunt Stucky, Louisville, Ky., re-elected: secretary, Dr. Henry E. Tuley, Louisville, Ky., re-elected. The time and place of meeting were left to the president, secretary and treasurer to decide. A report of the other proceedings will be given next week.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Bromipin by the Bowel.

Rahn, in *Ther. d. Gegenwort*, recommends the use of bromipin, administered per rectum, to infants. He advises it in doses of one grain to an infant one month old, doubling the dose with each month so that a child six months old should receive one and a half drams (6.00) of the preparation. He administers it mixed with one or two ounces of flaxseed tea. He states, in the treatment of infantile convulsions, that positive results are obtained within a few minutes.

In pertussis he obtained good results by administering it night and morning, diminishing the frequency and severity of the attacks. Also convulsions due to tuberculous meningitis were controlled by this preparation given three or four times in the twenty-four hours. Good results have been obtained from the use of this preparation in rachitis and epilepsy.

Hönigschmied, in *Pediatrics*, recommends bromipin in all affections where bromin preparations are indicated. He uses it in the treatment of vertigo, cerebrospinal meningitis, nervous insomnia, recent cases of chorea, in nightmare, melancholia and neuralgia. In cerebrospinal meningitis, he empties the bowel and gives an enema of 1 to 4 drams (4.-15), according to the age. The bromipin is given alone slightly warmed. He cites several cases where bromipin was used successfully.

Laryngeal Tuberculosis.

Castex, in *Amer. Med.*, recommends in the treatment of laryngeal tuberculosis that hot flannel binders be applied to the neck and renewed frequently during the first stage of the disease. The laryngeal mucous membrane may be sprayed with one of the following solutions:

℞.	Sodii benzoatis	gr. xlv	3	
	Aquæ destil.	℥iii	90	

M. Sig.: As a spray; or:

℞.	Acidi carbol.	gr. xv	1	
	Glycerini			
	Aq. destil., āā	℥ii	60	

M. Sig.: As a spray; or:

℞.	Menthol	gr. xv	1	
	Gomenol	ʒiiss	10	
	Alcoholis	℥ii	60	
	Aq. destil.	℥v	150	

M. Sig.: Apply locally as a spray.

[Gomenol is a terpinol preparation.]

He recommends that the treatment of the larynx be repeated two or three times a day. In the third stage the following is recommended:

℞.	Cocainæ hydrochlor.	gr. xxx	2	
	Morphinæ hydrochlor.	gr. xv	1	
	Antipyrini	ʒiiss	10	
	Glycerini (neutral)	℥ii	60	

M. Sig.: One teaspoonful added to half a glass of distilled water and used as a gargle.

Solis-Cohen recommends the following combination:

℞.	Orthoform			
	Anesthesin, āā	ʒi	4	
	Ext. suprenalis			
	Iodoformi, āā	ʒii	8	

M. To be insufflated into the larynx, especially when painful ulcerations are present.

And topically he advises the following:

℞.	Guaiacol	ʒiiss	10	
	Menthol	ʒi	4	
	Olei olivæ	ʒvi	25	

M. Sig.: Apply locally after an application of cocain.

Vomiting in Tuberculosis.

Pegurier of Nice, in *Bul. gen. de Ther.*, states, in the treatment of vomiting of phthisis, that the excitability of the gastric mucosa must be calmed. Small pieces of ice after meals are of benefit, together with the administration of anesthetic substances such as aqua chloroformi, menthol, hydrogen peroxid, and iced champagne. The following may be given:

℞.	Aq. chloroformi			
	Syr. aurantii flores., āā	℥ii	60	

M. Sig.: One tablespoonful after each meal.

The irritation causing the gastric irritability, such as tuberculosis of the pharynx, larynx or epiglottis, must be properly treated. As palliative measures the following combinations are recommended:

℞.	Pot. bromidi	ʒi	4	
	Glycerini	℥i	30	

M. Sig.: Paint the pharynx before each meal; or:

℞.	Cocainæ hydrochlor	gr. xxiv	1	65
	Aquæ	℥iii	90	

M. Sig.: Paint the pharynx when nausea appears; or:

℞.	Diiodoformi	ʒii	8	
	Cocainæ hydrochlor.	gr. i		06
	Morph. hydrochlor.	gr. 3/4		05

M. Sig.: To be used as an insufflation when the larynx is involved.

Administration of Gelatin.

According to Racchi in the *Practitioner*, gelatin when administered in a normal serum solution is absorbed more rapidly when given in the form of an enema than by the hypodermic method. It is absorbed and shows its beneficial effect within five or ten minutes and continues for five or six hours.

Sodium Chlorid in Scrofula.

Liegois, according to an abstract in the *Monthly Cyc. of Pract. Med.*, states, in those conditions recognized under the term scrofula, that the chlorid of sodium enhances the appetite and increases the flow of salivary, gastric, biliary and pancreatic secretions and aids assimilation. The combustion of albuminoids is especially increased. This salt opposes the loss of phosphates and influences and assists endosmosis and exosmosis. There is marked effect on the blood also. The erythrocytes are increased and the hemoglobin percentage is higher. The following combination is recommended:

℞.	Sodii chloridi	gr. iss		09
	Calcii phosphatis	gr. iii		20
	Calcii carb.	gr. 1/6		01

M. Ft. chart. No. i. Sig.: One such powder four times a day after meals.

The Use of Alkalies for Relieving Pain.

According to an abstract in the Pract. Med. Series of Year Books, Sir Lauder Brunton calls attention to the use of alkalies in relieving pain, especially that caused by toothache. The presence of acid in the carious tooth is the cause of the pain, and it has been demonstrated how the pain disappeared by the application of sodium bicarbonate. It is also of value in general aching of the teeth due to retracted gums. Alkalies relieve the sharp stinging pain accompanying furuncles, the pain in such cases being due to diminished alkalinity of the blood of the system in general as well as locally. Consequently he advocates alkalies both internally and locally in some cases of neuralgic and painful affections.

Pruritus.

Brocq, in *N. Y. and Phil. Med. Jour.*, gives the following combinations as of value in the treatment of pruritus:

℞.	Resorcin	gr. iv		25
	Hydrarg. chloridi mitis	gr. xii		75
	Zinci oxidi	gr. xxx	2	
	Petrolati	ʒv	20	

M. Ft. unguentum. Sig.: Apply locally; or:

℞.	Menthol	gr. iii		20
	Acidi carbol.	gr. iv		25
	Acidi salicylici	ʒss	2	
	Zinci oxidi	ʒiss	6	
	Liq. petrolati	℥i	30	

M. Ft. unguentum. Sig.: Apply locally to the affected parts.

In pruritus of the vulva, Verchère, in the same periodical, recommends the following:

℞.	Hydrarg. bichloridi	gr. xv	1	
	Alcoholis	ʒi	4	
	Aq. rosæ	ʒv	20	
	Aq. destil.	℥vii	210	

M. Ft. lotio. Sig.: Apply locally twice a day.

A. Robin advises the following to relieve the foregoing condition:

℞.	Spts. chloroformi	ʒii	8	
	Olei amygdalæ dulcis	℥ii	60	

M. Sig.: Apply locally; or:

℞.	Hydrarg. bichloridi			
	Ammon. chloridi, āā	gr. ii		12
	Emuls. amygdalæ	℥vi	180	

M. Sig.: As a local application; or:

℞.	Orthoformi			
	Diiodoformi			
	Talci, āā	ʒii	8	

M. Ft. pulvis. Sig.: Apply locally; or:

℞.	Menthol	gr. ¾		05
	Guaiacol	gr. viiss		50
	Zinci oxidi	ʒiiss	10	
	Liq. petrolati	℥i	30	

M. Ft. unguentum. Sig.: Apply locally.

To relieve the pruritus arising from eczema of the ear, Lichtenstein recommends ointments in [illegible] to lotions.

He employs, in addition to Lassar's paste, the following combinations:

℞.	*Olei cadini*	ʒss	2	
	Liq. petrolati	ʒv	20	

M. Ft. unguentum. Sig.: Apply locally; or:

℞.	Hydrarg. oxidi flavi	gr. xv	1	
	Liq. petrolati	ʒiv	15	

M. Ft. unguentum. Sig.: Apply locally.

According to Hyde, carbolic acid ranks first as an antipruritic, used in strength of 1 to 5 per cent. It may be combined as follows, according to Bronson, who uses it in a strong solution:

℞.	Acidi carbol.	ʒi-ii	4.-8	
	Liq. potas.	ʒi	4	
	Olei lini	℥i	30	

M. Sig.: Apply locally only over small areas.

Hyde recommends the following as a valuable lotion to relieve the pruritus of eczema:

℞.	Acidi carbol.	gr. xl	2	65
	Zinci oxidi	ʒi	4	
	Glycerini	ʒii	8	
	Aq. calcis q. s. ad	℥viii	240	

M. Sig.: Apply locally.

Or one of the following combinations:

℞.	Acidi hydrocyanici dil.	ʒss-ii	2.-8	
	Zinci oxidi			
	Calamini, āā	ʒi	4	
	Aq. calcis			
	Aq. sambuci, āā	℥iv	120	

M. Sig.: Apply locally; or:

℞.	Acidi carbol.	ʒss-ʒii	2.-8	
	Bismuthi subnit.	ʒi	4	
	Pulv. tragacanth.	gr. xl	2	65
	Aq. calcis	℥viii	240	

M. Sig.: To be applied locally; or:

℞.	Acidi carbol.	ʒiss-℥ss	6.-15	
	Glycerini	ʒii	8	
	Menthol	ʒi-℥ss	4.-15	
	Spts. vini rect. q. s.			
	Aq. destil. q. s. ad	℥viii	240	

M. Ft. lotio. Sig.: Apply locally.

Trigeminal Neuralgia.

Graham Brown, according to the *Courier of Med.*, recommends quinin in the treatment of neuralgia of the fifth nerve, given in two or three doses of ten grains each. Sodium salicylate may be given, but it is not so active as quinin. The following combination is also recommended as even more serviceable:

℞.	Quininæ sulph.			
	Sodii salicylatis			
	Antipyrini, āā	gr. v		30

M. Ft. chart. No. i. Sig.: One such powder every three or four hours.

He also advises aspirin in doses of grains 5 to 15 (.30-1.00). Butylchloral hydrate is very useful in such conditions combined with glycerin. Morphin should be resorted to only after all other remedies have failed.

Medicolegal.

Duty of Carrier When Passenger Becomes Sick.—The Supreme Court of Kansas holds, in Atchison, Topeka & Santa Fe Railway Company vs. Parry, that it is the duty of a carrier of passengers to exercise reasonable and ordinary care in looking after and protecting one who becomes sick or unconscious while a passenger. Whether such care has been exercised is ordinarily a question of fact for the jury.

No Action Maintainable by Posthumous Child.—The Supreme Court of California holds, in the case of Daubert vs. Western Meat Company, an action brought to recover damages for a man's death, that, where a child is unborn and its existence unknown to the party sued in such a case at the time a judgment in favor of the widow or other heirs is given, an action can not be maintained by the child after its birth, notwithstanding the provisions of section 29 of the Civil Code, to the effect that an unborn child is deemed to be in existence so far as necessary for its interests in the event of its subsequent birth. Whether the same rule would apply in a case where the existence of an unborn child was known to the party sued, at the time of the previous action and trial, the court says it was not intended to be here decided.

Communication to Undischarged Superseded Physician.—The Supreme Court of Kansas says, in the case of E. Patterson & Son vs. Cole, that a physician was employed to attend a patient who had suffered a personal injury. Afterwards the family physician came, and practically took charge of the case. Later, and within a few hours, the physician first called and again visited the patient, to inquire as to his condition, but administered no treatment. On this visit a statement was made to him by the patient as to the cause of the injury. The physician stated that he did not then regard himself as an attending physician, but admitted that there had been no discharge. The patient, on the other hand, stated that he regarded the doctor as his physician when the statement was said to have been made. The Supreme Court holds that, that being true, the relation of confidence existed, and the statement was rightly excluded on the ground that it was privileged.

Death from Medicine Taken to Allay Pain.—In the case before the Supreme Court of Missouri of Dezell vs. Fidelity and Casualty Company there was involved a policy of accident insurance which insured "against bodily injuries sustained through external, violent and accidental means," and which provided that "this insurance does not cover . . . injuries, fatal or otherwise, resulting from poison or anything accidentally or otherwise taken, administered, absorbed or inhaled." The court holds that the better reason supports the rule that such exceptions in such policies do not cover medicine (even though it contain poison) or anything taken or administered in good faith to alleviate physical pain, even though it results in unexpected and unintentional death. In this case, the death of the insured was caused by the effects of morphin contained in a prescription for neuralgia given him by his physician which he had had refilled, and the court holds that, so far as the provisions of the policy quoted were concerned, the beneficiary who brought this action was entitled to a verdict as a matter of law.

Skill Required of Surgeon—Not Insurer of Patients.—In the malpractice case of English vs. Free, according to the statement of the Supreme Court of Pennsylvania, the party suing had a car body fall on him, crushing him to the ground and seriously if not permanently injuring the hip joint. He was taken to the office of the party sued, a practicing surgeon, who examined the injury, gave morphia and had him sent to his home. The surgeon continued to treat the case for about four months. Two other surgeons during that time were also called in to see the patient. At the end of that time the surgeon sued told the patient he could do nothing more for him and ceased his attentions. As his hip was not well, and the leg shorter than the other, the man went to Pittsburg and entered a hospital, where the injury was diagnosed as a dislocation of the hip joint, and treated as such, the patient in about two weeks recovering and returning to his home. He claimed, however, and offered evidence tending to show, that there had not been a complete restoration of the limb to its normal condition, and that this result was owing to an incorrect diagnosis of his injury by the surgeon sued, and who, as he alleged, did not treat it as a dislocation, which it subsequently proved to be. The Supreme Court holds that a nonsuit was rightly entered. It says that it is settled law in this class of cases that "a surgeon undertakes to possess, and in the treatment of a case to employ, such reasonable skill and diligence as is ordinarily exercised in his profession; and in judging of the degree of skill, regard is to be had to the advanced state of the profession at the time." Taking this to be the law, the burden was on the party suing to prove, at least by the weight of the evidence, that the surgeon sued failed to treat him with reasonable professional skill. The court thinks that he failed in this proof. It says that the surgeon beyond question was a skilled one, in good repute; he gave attention to the case; he called in to aid him two competent surgeons. It might be that he was mistaken in his diagnosis. The undisputed testimony of quite a number of surgeons, called as witnesses, was that this injury was such that it was very difficult to detect its exact character. The hospital surgeon, who, after putting the patient under the influence of an anesthetic, correctly diagnosed the injury as a dislocation, then reduced it, then by careful treatment practically cured him, testified that in the early stages of the injury it was sometimes exceedingly difficult, and almost impossible, to detect the exact character of the injury; that he had known such injuries to be only correctly diagnosed by the use of *x*-rays. And such was substantially the testimony of all the reputable surgeons called on either side. Taking the testimony of the party suing in its most favorable aspect, it only showed, not that the surgeon did not bring to the treatment of the case reasonable skill and diligence, but that he might have been mistaken in not finding out its exact nature. To hold him answerable for not exercising more than ordinary professional skill would be imposing on him a burden heavier than the law has yet put on the professional man's shoulders. A surgeon is not an insurer of his patients.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical News, New York.

October 3.

1 *The Use of the X-Rays in the Treatment of Diseases of the Skin, Certain Forms of Cancer, of the Glandular System and of Other Diseases, and as a Means of Relieving Pain. Francis H. Williams.
2 *Treatment of Migraine. B. K. Rachford.
3 *Paroxysmal Hematuria (Hemoglobinurie à Frigore). W. Gilman Thompson.
4 Removal of a Heavy Silk Ligature from Around the Right Pneumogastric Nerve; Clinical Symptoms Before and After Removal. Charles A. Powers.
5 A Review of Some Recent Investigations Relating to the Pancreas. T. Stuart Hart.
6 *The Obstetric Significance of Retrodisplacements of the Uterus. Samuel M. Brickner.

1. **The X-Rays.**—Williams finds the *x*-ray the very best method of treatment of numerous skin disorders, such as eczema, psoriasis, acne, sycosis, lupus, etc. In Hodgkin's disease, which has heretofore been hopeless as regards treatment, it seems to promise good results. Tuberculosis of the lung is still in the experimental stage, but good results have been reported and also in chronic tuberculous peritonitis. He also mentions conjunctivitis of long standing as yielding to these rays, and he remarks on their analgesic and tonic effects. As regards tumors, he thinks the rays promise the best modification of treatment for superficial new growths. As regards the deeper ones, great care must be taken in the selection of cases to avoid injuries and obtain good results. The dangers of *x*-ray injuries are mentioned, and he notes as a remarkable property of the rays their power of passing through healthy tissue without damaging it to bring about healing in unsound tissue beyond. The paper is illustrated with cases showing good results.

2. **Migraine.**—Rachford's theory of migraine is that it is an auto-intoxication, a constitutional trouble principally due to hepatic insufficiency causing a non-destruction of toxins which would otherwise be destroyed by the liver. He gives formulas for treatment. The following is the one which is principally recommended:

℞.	Sodii sulphatis (dry)	gr. xxx	2	
	Sodii salicylatis (from wintergreen)	gr. x		65
	Magnesi sulphatis	gr. l	3	25
	Lithii benzoatis	gr. v		33
	Tinct. nucis vomicæ	gtt. iii		2
	Aquæ destil. to make	℥iv	120	

M.

Modifications of this are also given. The formulas are analyzed. Magnesium sulphate is necessary to overcome the constipation and unload the portal circulation. Sodium sulphate acts much the same way. Nux vomica is largely to overcome the soapy taste, but sodium salicylate is the remedy *par excellence*, acting not only as an intestinal antiseptic, but as a stimulus to the function of the liver. This formula is made up in large quantities and put up in siphons charged with carbonic acid and sold on prescription at 50 or 60 cents. The adult patient is directed to take from one-fourth to one-half glass of this mixture each morning half an hour before breakfast, the only dose during the day. Other remedies mentioned are sodium benzoate in 20-gr. doses after lunch and dinner; sodium salicylate, salol or cannabis indica in ¼-gr. doses two or three times a day for the paroxysms. Another drug which has had a deservedly good reputation is mercury, and he has used it to great advantage in the form of gray powder in the treatment of migrainous conditions in children. For the attack itself he advises rest in bed in a dark room without food. If the attacks are very severe, citrate of caffein, 2 gr., and antipyrin, 10 gr., with 30 gr. of bromid of potassium in half a glass of water, sometimes substituting sodium salicylate for the antipyrin, and proper dieting. Hygienic treatment is essential. The patient should not be allowed to eat too much. Coffee, alcohol, sweets and red meats should be limited or eliminated from the diet. Exercise in the open air, etc., and general massage are advised.

3. **Paroxysmal Hematuria.**—This disorder is defined by Thompson as a profound neurosis, chiefly affecting the vasomotor system and called into activity by exposure to moderate degrees of cold, by muscular fatigue or mental emotion. He reports cases and discusses the theories of the disorder. The treatment is mainly satisfactory in the syphilitic forms, but patients who have to expose themselves to cold may do well to avoid mental and bodily fatigue and be warmly clad. Stimulants should be prohibited. Medicines, as a rule, are not of much value. The attacks may be aborted by hot baths or putting to bed with hot-water bottles or blankets, by taking simple hot draughts or hot milk. Diffusible stimulants are useful.

6.—See abstract in The Journal of July 4, p. 52.

American Medicine, Philadelphia.

October 3.

7 *Practical Consideration on Intestinal Anastomosis. Theo. A. McGraw.
8 *The Lymph Circulation in Modern Medicine. Hugh A. McCallum.
9 The Causation and Treatment of Postnasal Discharge. Perry G. Goldsmith.
10 *The Complications of Hypertrophy of the Pharyngeal Tonsil. George B. Wood.
11 *Surgery of the Upper Right Quadrant of the Belly. J. F. Binnie.
12 Chronic Lead Poisoning. John J. Gilbride.
13 Holiday Repair vs. Climacteric Decay. John Knott.

7. **Intestinal Anastomosis.**—McGraw reviews the conditions that call for operation in the intestine or at the pylorus and notices certain peculiarities. He points out the symptoms which characterize pyloric obstruction or obstruction in the upper portion of the duodenum, mainly indigestion, eructation, distended and prolapsed stomach, increase of pain, vomiting consisting of mucus and blood as well as ingesta, absence of bile and swelling at the left of the median line as a rule. These may be simulated by the nausea of pregnancy or nervous nausea, but never by chronic dyspepsia. There should be no indecision when this train of symptoms appears, but surgery should be called in. He thinks that operation will usually be successful in pyloric obstruction so long as the ejecta consist solely of fluid and colorless mucus, but when the vomiting becomes green, or especially black, he refuses to operate. The question of the method is discussed. He points out the advantages which he claims for his elastic ligature. Its application is very simple. The two viscera are brought together and the surgeon connects them with a single line of Lembert sutures, a little longer than the desired opening. The rubber cord is then, by means of a large needle, passed through the walls of first one and then of the other bowel and tied firmly in a single knot. Before tying it, however, a silk thread is laid under the knot, and after the knot has been firmly tied with the rubber stretched to its utmost, the silk thread is

made to fasten it in place. Both threads are then cut short and the Lembert suture is now completed so as to form a ring enclosing the rubber. In passing the rubber through the gut it should be stretched in order to lessen the size and drawn slowly and carefully through in order not to tear the gut. Of course, the rubber must be fresh and first-class, as old rubber may break. The advantages of the procedure are its simplicity and rapidity, its aseptic quality, for the rubber fills the openings through which its passes, preventing extravasation; delay in opening the passage until the intestines have become well glued together, and the ability to make with it a communication of any desired length. If we compare it with the incision and suture it is much more easily and quickly performed, much more aseptic; it causes less hemorrhage and is less liable to dangerous complications from faulty technic than the Murphy button. The disadvantages which have prevented its more general use are the fact that the surgeon can not see the opening that he makes. He closes the abdomen on still intact intestines and is obliged to put his trust in the slow, unseen action of a constantly contracting rubber cord, but it is only after repeated trials of its efficiency that he learns to have confidence in the procedure.

8.—See abstract in The Journal of September 5, p. 626.

10. **Hypertrophy of the Pharyngeal Tonsil.**—The conditions accompanying overgrowth of the pharyngeal tonsil, which Wood declares is a distinct organ, are described in detail by him. He says the tonsils are of no more importance than the ordinary lymph gland, and their removal, therefore, offers no objection. He divides the complications of hypertrophy of the pharyngeal tonsil into two groups: mechanical and infectious. Mouth breathing is almost purely a mechanical complication, but may produce conditions favoring infection. He thinks that many children who appear backward at school are so because of aprosexia, as it has been called, or failure of attention connected with this condition of adenoids. Skeletal deformities, such as chicken breast, narrowing of the alveolar arch of the upper jaw, etc., are frequently due to mouth breathing, though the latter is due more to poor nourishment than to any mechanical influences. The most serious complications due to hypertrophy of the pharyngeal tonsil are otitic disturbances. While involution of the tonsil usually takes place between the ages of 10 and 20, he has seen the pharyngeal tonsil well developed in persons of 40. He closes with the statistics of the dispensary records of the Children's Hospital with a total of 361 patients with nose and throat trouble. Of these 149 were hypertrophy or adenoid growths; 87 of these being boys and 62 girls. Nasal discharge or recurrent attacks of coryza were present in 78 cases; some form of ear trouble was present in 63, or 42 per cent. Symptoms of nasal obstruction were present in 117, or 78 per cent. Headache was present in 28 cases, 19 per cent.; cough in 45 cases, or 30 per cent. All these symptoms depend on the adenoid hypertrophy and disappear after removal of the growth. When a number of such symptoms are present he believes a tentative diagnosis can be made in the majority of cases.

11. **Surgery of the Upper Right Quadrant of the Abdomen.**—Binnie draws attention to the easily neglected fact that biliary lithiasis and empyema of the gall bladder are not the only affections of the right upper quadrant of the abdomen which are open to surgical relief.

Medical Record, New York.

October 3.

14 *A Case of Diffuse Gonococcus Infection of the Entire Upper Extremity, with Notes on the Occurrence and Course of Gonorrheal Septicemia. Charles A. Powers.
15 *The Manic Depressive Psychosis and Some of Its Etiologic and Pathologic Phases. Walter D. Berry.
16 Causes, Consequences and Care of the Injuries to the Parturient Canal. Benson M. Feldman.
17 *The Selection of the Anesthetic in Children. S. J. Kopetzky.
18 *An Operation for Removing the Tonsils. William H. Steers.

14.—See abstract in The Journal, xl, p. 1670.

15. **Manic Depressive Psychoses.**—Berry describes this condition as understood by alienists and reports a case. He calls attention to the danger of consanguineous marriages and of heredity in these cases.

17. **Anesthetics in Children.**—Kopetzky says that the claim that the use of chloroform is safer than the employment of ether with children is not borne out by close observation. This is especially true in robust and healthy children. It is dangerous because an overdose may be easily given. Cardiac failure may set in at the beginning of the administration because of the violent and dangerous struggles which take place, and the tendency to push the anesthetic is too tempting. Cardiac syncope following vomiting may occur at any time during the administration of chloroform, or after, and result fatally. On the other hand, nitrous oxid is quick in action, without dangerous symptoms, and when followed by ether from a closed inhaler, rapid evaporation from the lung is avoided and ether pneumonia does not occur. In conclusion he warns against the practice of commencing short operations on the nose and throat and eye before complete anesthesia has been induced; also the practice of using chloroform in the upright position.

18. **Tonsillotomy.**—Steers recommends the use of a hook-like knife modeled from a strabismus hook, with a longer and stouter handle and with a knife edge on the concavity and the end of the hook. The finger of the operator is passed over and around the tonsils to detect any pulsating vessels and the lower tonsil is seized with a volsellum and drawn toward the opposite side. The described hook-knife is then passed between the tonsil and the anterior pillar of the fauces, just beneath what he terms the basement membrane of the tonsil, care being taken that it is not passed into the tonsil mass, but beneath its basement membrane. The finger of the operator is then introduced into the wound, and making sure that pulsating vessels can not be felt, and using the finger as a blunt dissector, the mass is turned out, thus leaving it attached only to the posterior pillar and by mucous membrane only, which is divided by an ordinary blunt-pointed tonsil bistoury. Hemorrhage is free at first, but ceases promptly. If any bleeding vessels are present they are seized with forceps and treated as in any other situation. When removed it will be found that the base of the tonsil is covered by a thin membrane and that the dissection has been carried on entirely outside the tonsil. Without turning the patient the other tonsil is then removed in the same way. After the wounds have healed it will be found that the pillars of the fauces stand out in their proper position and their muscles act freely. There will be no return of the tumor. He thinks we may guard against most hemorrhages by careful palpation and dissection outside the tonsillar tissues and by completely removing the growth.

New York Medical Journal.

October 3.

19 *Modern Treatment of Fractures, with Special Reference to Lower End of Humerus and Bones of the Leg. H. S. McConnell.
20 *The Sources and Methods of Infection in Pulmonary Tuberculosis. J. O. Cobb.
21 Essential or Idiopathic Spasm. William C. Fiske.
22 *A Form of Rational Treatment for Corneal Ulcers. William L. Phillips.
23 Growths of the Male Urethra, with Report of Three Cases. Joseph E. Morrow.

19. **Fractures.**—McConnell condemns the ready-made splint and pleads for immobilization of fractures, the use of absorbent cotton and the making and adjusting of plaster-of-paris strips. Ordinary plaster-of-paris bandages he considers a relic of barbarism. In retaining fractures in children, especially of the lower end of the humerus involving the joint and of all fractures or displacements above or below the joint, he uses absorbent cotton. He cuts out absorbent cotton strips, folding them over to get the desired length and thickness, and with two bands of this kind puts the limb in the desired position and adapts them as he would ordinary splints. He first employed this method by accident, but has since used it in fifteen cases altogether, greatly to his satisfaction. In putting up fractures of the lower end of the humerus he objects to the method of flexion and thinks extension is much better, as it has the advantage of enabling one to examine the dressings with a minimum of distress to the patient. In the treatment of fractures of the leg he uses for a permanent dressing splints

of cotton flannel, the lateral ones overlapping the more posterior one, and also the foot, holding it at right angle to the limb, covered and stiffened with plaster of paris, to be applied after temporary dressing with the long wood splints, the posterior one being retained with the permanent dressing. The advantages of these overlapping splints made in this way with the spine of the tibia exposed is that it makes a light, firm, close-fitting dressing; the absence of cotton wadding permits the splint to mold itself, and the use of one layer of wide gauze bandage makes it impossible to constrict the member; the spine of the tibia being exposed any deviation in alignment is readily detected. Lateral inspection is facilitated by cutting the bandage between the side splints, lowering one or both, and again tightening them with straps. At any time, grasping the two side splints between the two hands any looseness will be discovered. This form of dressing immobilizes the knee, ankle joint and fractured bones and maintains the foot at a right angle. If proper care and skill have been used in the application, it will be unnecessary to remove the posterior splint until union has occurred, and last, but not least, the patient can lie on his side, sit up, or place the limb in any position he desires. McConnell criticises the use of passive motion in fractures in or near the joint at any time until after the fourth week. In conclusion he says our objects in the treatment of fracture should be: 1. Restoration of function. 2. Maintenance of the symmetry of the member. These should be accomplished by procedures that are as comfortable to the patient and as little annoying to the surgeon as is consistent with the object desired.

20. **Tuberculosis.**—Cobb reviews the various theories of infection in tuberculosis, showing that foreign matter can be inhaled directly into the lungs and that it may also reach the lungs through the intestinal tract. In cattle he holds infection is caused by ingestion of infected sputum in the case of the cow, of tuberculous milk and offal in swine, and in birds and fowls by picking in their own infected dejecta. In man, while he admits the inhalation possibilities, he thinks the principal avenue of infection is through the ingesta. Milk he does not consider an important factor, basing his opinion largely on the great frequency of tuberculosis among the Chinese and other people that do not use milk to any extent. His personal opinion is that tuberculosis can be conveyed both by inhalation and ingestion, but largely, if not principally, by infected food, the common house fly being the medium of conveyance from the ejected sputum to the food on which it alights.

22. **Corneal Ulcer.**—The rational treatment here described by Phillips consists in the use of adrenalin to contract the arteries, mild antiseptics, like boric acid, to antisepticize the conjunctival sac, nuclein solution, 5 per cent. (the hypodermic solution being less irritating), to build up the lymph corpuscles to a healthy condition; lastly, he would treat the conditions that have a bearing on the disease. In many cases the ulcer originates from other diseased parts, such as caries, adenoids, hypertrophies of the turbinates, etc. He would drop the suprarenal extract into the eye three times a day, and if the severity of the disease increases, the medicine must be instilled oftener, depending on the absorption of the drug and its action on the heart. The eye should be kept clean with warm boric acid solution, the nuclein solution being combined with and given in the same way as the suprarenal. Adrenalin chlorid 1-1000 does not seem to produce the same effect as does the suprarenal and chloretone when combined with the nuclein solution.

Boston Medical and Surgical Journal.

October 1.

24 *Urethral Tuberculosis, with Report of a Case. Arthur L. Chute.
25 *A Note on the Transmission of Whooping Cough by Indirect Contagion. John Lovett Morse.
26 The Ill Health of Francis Parkman. (Concluded.) George M. Gould.

24. **Urethral Tuberculosis.**—After detailing a case Chute discusses the literature and the characteristics of the disorder. In the cases which have come to autopsy he finds there have been almost invariably other lesions of the genito-urinary tract, and tuberculosis of the urethra may have been secondary to them. Lesions of the prostate, epididymis and vesicles are almost always associated with infection by extension. The question whether urethral tuberculosis may be primary is still an open one, but in most cases it is unquestionably secondary. The symptoms, aside from hematuria, are gleety discharge, pain on urination, nodular conditions and obstruction. The painful erections from which his patient suffered seem to have been unusual. Tubercle bacilli in the discharge is indisputable proof. Granulations or multiple ulcers of the urethra are almost pathognomonic. A urethral discharge with no history of exposure to venereal infection is suggestive, especially if no gonococci can be found. The prognosis depends largely on the primary disease. Most of the reported cases have been fatal and recovery will necessarily be tedious. The treatment will depend on the primary disorder. Hygienic measures usually hold a most important place. Chute is doubtful as to the local treatment. Where a stricture or infiltration offers an obstruction, of course surgical measures are required, and also where there is spongiosum involvement with cavities the tuberculous cavities should be laid open, or where the urethra is greatly ulcerated, perineal urethrostomy may give relief and may bring about recovery. In some very advanced cases amputation is the best procedure.

25. **Whooping Cough.**—Morse has been repeatedly asked whether whooping cough could be carried by a third party, and he wrote a circular letter to the members of the American Pediatric Association and received replies from forty. Three of them reported 5 cases, one of which seemed rather doubtful. Opinions vary as to its possibility. He thinks it hardly possible to draw positive conclusions. The cases which were given seemed to justify the assumption that whooping cough can be carried by a third person, but the fact that forty members of so wide experience see so few cases proves that it must be very rare.

St. Louis Medical Review.

September 26.

27 Report of a Case of Myasthenia Gravis. Francis Reder.

October 3.

28 A Successful Case of Cholecystenterostomy with the Murphy Button. H. C. Dalton.

Cincinnati Lancet-Clinic.

October 3.

29 Myeloid Leukemia; Report of a Case, with a Brief Résumé. H. G. Marxmiller.
30 Surgery of the Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued) B. Merrill Ricketts.

Medical Fortnightly, St. Louis.

September 25.

31 Sleep. William F. Barclay.
32 A Contribution to the Study of the Etiology and Pathology of Renal Disease. Henry Jacobson.
33 *The So-called Granular Degeneration of the Red Blood Corpuscles. C. Fisch.
34 Exophthalmic Goiter; Report of a Case. M. A. Bliss.

33. **Granular Degeneration of the Red Corpuscles.**—This phenomenon, which has been attributed to degenerative processes, is held by Fisch to be rather a regenerative one. It is normal in the fetus and also in certain animals. It disappears in anemic cases before death; if it were retrogressive he could not explain why it should be limited before death. He cites other reasons which confirm his opinion as to its non-degenerative character. He thinks the granulations have a nuclear origin.

Pennsylvania Medical Journal, Pittsburg.

September.

35 *The Value of the Peristaltic Movements of the Intestines as Elicited by Auscultation in the Diagnosis of Non-penetrating Wounds of the Abdomen, with Remarks on the Diagnosis in General. O. C. Gaub.
36 Flat-foot. James W. MacFarlane.
37 *The Choice of a General Anesthetic in Ophthalmology. Edward Jackson.
38 Eye Strain and Functional Disorders. Charles A. Wishart.
39 Ear Diseases in General Practice. I. P. Klingensmith.

35. **Intestinal Peristalsis in Diagnosis.**—Gaub has studied experimentally and otherwise the diagnostic value of intestinal peristalsis as a sign of intestinal injury in cases of non-penetrating abdominal injuries. He operated on dogs and concludes that if any lesion of the gastro-intestinal tract occurs the peristalsis usually returns with general subsidence of the

symptoms of shock. Often the absence of peristaltic movement, he concludes, is not of sufficient value to determine the celiotomy, and the increase of the pulse rate, 120 or over, if peristalsis is present, does not justify opening the abdomen. If an accumulating exudate is found by palpation and percussion, operation is necessary. If all means to prevent shock have been exhausted and the pulse rate is small and rapid and peristaltic movement absent at the end of four hours, exploratory operation is justifiable. The facial expression and the presence of rigidity and tenderness may often be sufficient to induce operation at a still earlier date.

37. **The Anesthetic in Eye Operations.**—Jackson finds that nitrous oxid anesthesia is too brief for some cases and not entirely without danger, but the principal objection to it is the intense venous congestion it causes. While ether is unquestionably less dangerous than chloroform, its irritating qualities are to some extent against it. Chloroform is objectionable on account of the danger of cardiac inhibition, and if operations about the face are specially prone to cause such accidents, those about the orbit can be no exception. He speaks favorably of ethyl bromid, but it must be used with all the precautions observed in the administration of chloroform. Rapidity of recovery may be a drawback if the administration is not closely watched. It certainly is unsuited for use in cases of prolonged operation. General anesthesia may be required if the eye is severely inflamed. Nitrous oxid and bromid of ethyl are hardly to be considered in these cases. For enucleation of the eyeball, or the extirpation of tumors within the orbit, the greater safety of ether will generally decide in its favor, but venous congestion is against it in the difficult dissections deep in the orbit. Where the actual cautery is required ether is contraindicated on account of its inflammability. Ethyl bromid is not satisfactory for the destruction of embedded powder grains, because the anesthesia is liable to be incomplete, but it is especially appropriate for strabismus operations in young children. He would not allow it to be employed except when administered by an experienced person drop by drop, as in the case of chloroform.

Therapeutic Gazette, Detroit.

September 15.

40 A Treatment of Osteitis Deformans and Osteoarthritis. Frank E. Peckham.
41 *Clay Paste. J. Frank Wallis.
42 Adenoids as a Cause of Enlarged Tonsils and Other Pathologic Conditions. W. G. B. Harland.
43 A Rational, Rapid and Efficient Remedy for Gonorrhea. W. H. Whitehead.
44 Some Facts in Regard to the Use of Strychnin. A L. Benedict.

41. **Clay Paste.**—Wallis finds a mixture of wet sterilized clay for application in skin diseases has decided advantages. It has, beside its property of holding water and thus assisting osmosis, some therapeutic virtues depending on the mineral salts present, not overlooking the antiseptic, alterative, astringent and sedative properties peculiar to certain of the absorbent earths. Clays containing a large percentage of kaolin are preferred, and the dressing kept constantly moist by the application of a wet towel several times a day. To further prevent its becoming dry, he modifies his preparation by adding vaselin or lard, incorporating the fat with the paste by the aid of an emulsifying agent, the best of which is ichthyol. His standard paste contains 50 parts of kaolin and 25 each of water and petrolatum, with 4 per cent. ichthyol. Of course, the formula can be modified. In eczema rubrum of the leg, this formula may require a larger amount of kaolin and a diminished amount of vaselin. He thinks care should be taken to avoid an excess of ichthyol, which is irritating in certain forms of eczema. Glycerin should be used in this combination with caution, as it may cause discomfort and increased inflammation.

St. Paul Medical Journal.

September.

45 *The Diagnosis of Incipient Pulmonary Tuberculosis. Christian Johnston.
46 Acute Osteomyelitis. H. E. Frost.
47 The Medical and Surgical Treatment of Suppurative Affections of the Middle Ear. Cornelius Williams.
48 Pericarditis in Children. Walter R. Ramsey.
49 *The Boundary Line Between Chronic Alcoholism and Alcoholic Insanity. Arthur W. Dunning.
50 Two Cases of Tetanus Which Recovered. J. C. Boehm.
51 Immobilization of the Lower Jaw. John T. Rogers.

45. **Tuberculosis.**—Johnston points out that the so-called incipient and curable cases of tuberculosis are, for the most part at least, those of the so-called pretubercular condition, and that when the disease is fairly advanced in the great majority of cases there is little hope of its cure. There are certain cases where signs of tuberculosis exist, and yet the disease is absent, such as those with bronchiectasis, the result of a former bronchitis, and exceptionally in case of consolidated lung tissue after pneumonia. Old cicatricial tubercular lesions are present, he thinks, in quite a percentage of people after 30 years of age. When these patients are run down they usually cough a great deal and present symptoms of tuberculosis without actually having the disease. He thinks such cases swell the list of cures of consumption. In another class of cases the disease may be quite curable where the tendency to fibrosis is so strong that the infective process is kept within bounds. The main trouble, however, in the diagnosis of early consumption is the late recourse to treatment of the patients themselves. The diagnosis of pulmonary tuberculosis in its early stage, whether characterized by general weakness, loss of weight, chronic dyspepsia, etc., is a matter of weeks, and sometimes of months.

49. **Chronic Alcoholic Insanity.**—Dunning thinks the importance of recognition of alcoholic insanity is very great, but is often exceedingly difficult. The profession, therefore, should make a more careful study of the chronic alcoholic and be able to distinguish between the sane and insane alcoholic cases. The state should also be induced to provide for prolonged restraint and control of that class of periodic insanity known as dipsomania as well as other types of alcoholic insanity. When we are satisfied that a man is insane, he thinks, we should stand by our conviction regardless of lawyers or the popular notion that common drunkenness accounts for the erratic behavior.

Maryland Medical Journal, Baltimore.

September.

52 A Case of Purpura Hemorrhagica, with Hemorrhage Into Brain, and Death. Arthur Wegefarth.
53 *How Should a Modern City Protect Its Water Supply? Charles O'Donovan.
54 Suggestions Concerning the Prevention of Serious Complications in Ear Diseases. Hiram Woods.

53. **Protection of the Water Supply.**—O'Donovan recommends that cities should buy up large tracts of territory, including the water sheds from which their water supply is derived, and forest it, making it a sort of public park, a part of which might be used as a pasture, but cultivation should be excluded, and any land which is liable to produce silting into the streams from which the water is derived should be acquired and devoted to forests or pasture. In this way a double purpose will be served, a revenue would be at the same time acquired, the city would have a public park and the water supply would be purified.

International Medical Magazine, New York.

September.

55 Certain Abnormalities of the Umbilical Cord Giving Rise to Dystocia. William R. Nicholson.
56 Paresis of the Confusional Type. William Pickett.
57 *Some Suggestions in the Management of Children Predisposed to Phthisis. Albert McConaghy.
58 Heart Cases in Summer. William F. Waugh.
59 Two Interesting Deformities Occurring in Children, One Congenital, the Other Acquired. I. Valentine Levi.
60 A Case of Carditis. L. H. Bernd.
61 Methods of Treatment in Gastro intestinal Diseases; Removal of Cause of Chief Importance. Boardman Reed.

57. **Tuberculous Disposed Children.**—McConaghy recommends the use of moderately cold baths by rubbing, the avoidance of muffles, stocks and furs, and the taking of a glass of hot or cold water on rising, the use of breathing exercises in a well-aired room, regular habits of defecation after this exercise, playing in the sun at least an hour every day, the encouragement of proper carriage of the body with chest upward and forward, nose breathing and deep breathing, sleeping on a bed without a pillow and the limitation of studies.

American Practitioner and News, Louisville, Ky.

August 1.

62 Relation of Academic to Medical Education; the Typical Physician. William H. Wathen.
63 Exostosis of Orbit, with Report of a Case. D. C. Bowen.

64 Laceration of the Bowel, without External Evidence of Injury; Report of a Case, with Remarks on Diagnosis. E. B. Claybrook.
65 Some Observations on a Crusade Made Against the Mosquito in Talladega During Summer of 1902. B. B. Sims.
66 Pulmonary Anesthesia. W. A. Bryan.

Ophthalmic Record, Chicago.

October.

67 Tuberculosis of the Conjunctiva. Edward Jackson.
68 The Systematic Use of Cylinders in Making the Shadow Test. Alexander Duane.
69 *An Uncomplicated Fourth-Nerve Paralysis of Traumatic Origin. James W. Dunn.
70 *Will Certain Occupations in Time Affect the Cylindrical Curvature of the Eyeball? Paul Guilford.

69. **Uncomplicated Fourth Nerve Paralysis.**—In the case reported by Dunn the man fell, striking the back of his head. He soon apparently recovered, but the next morning diplopia was present in the lower field. The only other symptom was the contusion on the back of the head. The treatment given was iodid of potash and mercury internally and galvanism, soon changed to iodid alone and local applications of faradism. Improvement began in four weeks and remained stationary for about a month, when the double vision suddenly disappeared. Dunn thinks this precludes any possibility of fracture of the base of the skull, and that, as in the cases reported by Leber, the lesion was rupture of the trunk of the fourth nerve by concussion.

70. **Curvature of the Eyeball.**—Guilford finds that railroad engineers show very markedly greater flattening of the eyeball than do other persons of the same age, and attributes it to pressure of the wind. The engineer sits in his cab with head out, usually looking directly forward, and presses his eyelids close against the ball to protect the eyes from dust, etc., which tends to flatten the cornea. He says if this is true with locomotive engineers might it not be true perhaps to a lesser extent in others engaged in outdoor occupations exposed to the wind.

Southern California Practitioner, Los Angeles.

September.

71 *The Roll of the "Ball-valve" in the Etiology of Appendicitis. C. Van Zwalenburg.
72 *Pernicious Anemia. E. L. Leonard.
73 The Recent Epidemic Among the Whittier School Boys Apparently Caused by Ptomaine Poisoning. W. V. Coffin.
74 The Differential Diagnosis of Conjunctivitis and Iritis. George J. Lund.
75 Excision of the Tongue for Cancer. Walter Whitehead.

71. **The "Ball-Valve" in Appendicitis.**—Van Zwalenburg describes the different anomalies in appendicitis and explains his theory as to the action of the loose bodies and the ball-valve in producing symptoms. He concludes as follows:

> To sum up, my argument is: 1. That the ball-valve is an important factor in many cases of appendicitis, I am inclined to say the majority. 2. That in some cases, at least, the ball-valve is the principal factor and directly responsible for the acute attack. 3. That the pressure on the blood vessels of the mucosa and submucosa is the cause of the infection, and of the necrotic changes. 4. That a number of the symptoms of appendicitis are evidence of obstruction or strangulation. 5. That the first condition, being purely a mechanical one, practically a strangulation, the importance of immediate operation follows as a corollary. In conclusion, may I suggest that you distend a few appendices as I have indicated, and note the pressure effects, instead of splitting them all open immediately to see the concretion.

72.—This article has appeared elsewhere. See The Journal, xl, ¶18, p. 1541.

Wisconsin Medical Journal, Milwaukee.

September.

76 *A Note on the Relation of Neuralgia to Altitude, with Report of Two Cases. F. Savary Pearce.
77 *Hemorrhage Into the Cranial Cavity Following Injury to the Skull. Charles H. Lemon.
78 Report of a Case of Tuberculosis of the Adrenals, with Pathologic Specimens. Julius Noer.

76. **Altitude in Neuralgia.**—Pearce reports two cases of facial neuralgia, one of which was badly affected by residence at a height of 2,500 feet above the sea level, the other by residence in Denver at an altitude of one mile above the sea level. Residence in a lower altitude decidedly benefited the condition. He suggests that there is quite a field for study as to the effect of climate and altitude on disease.

77. **Brain Hemorrhage.**—Lemon holds that all cases of brain congestion and laceration should be operated on, but as many cases give symptoms out of proportion to the actual injury, instead of waiting for classical symptoms to show themselves when signs of cerebral compression are present and the life of the patient is imperiled, the physician should select some plan for relieving the undue tension. The reasons for making a window in one of the long bones within the first forty-eight hours for osteomyelitis are no greater than those for making one in the skull for the same purpose of relieving tension. He thinks we should in future be more on the lookout for signs of compression and use the trephine and chisel more promptly to allow the products of inflammation to escape. Three cases illustrating his ideas are reported.

Brooklyn Medical Journal.

September.

79 *The Lateral and Retro-positions of the Immobile Uterus; Their Clinical Significance and Treatment. Edward J. Ill.
80 A Case of Fracture of the Skull, with a Very Prompt Epileptic Sequence. Calvin F. Barber.
81 *Some Observations on the Treatment of Neurasthenia at the Dispensary Clinic. Cecil MacCoy.
82 Does Lodge Doctoring Pay? Robert E. Coughlin.
83 Surgical Treatment of Congenital Clefts of the Palate in Infants. Truman W. Brophy.

79. **Lateral and Retropositions of the Uterus.**—The special subject of Ill's article is displacement and fixation caused by the short sacral and short broad ligaments, and not due to inflammation or adhesions, scars or tumors. The first writer who mentioned lateral displacement as producing symptoms was Schultz of Vienna, but since then Burrage of Boston has noticed the subject. Lateral displacements seem to be acquired during childhood or possibly are congenital. If the former is the case, the symptoms begin with the onset of menstrual life. The symptomatology is not very varied. There is usually pain in one or the other iliac region, most commonly on the side of the longer ligament, sometimes severe enough to prevent exercise, and it even has caused the recommendation of removal of the ovary. The pain increases at the menstrual epoch, and it usually takes the patient several days to recover. A sensitive spine or painful coccyx are occasionally observed, and these are commonly the most hopeless cases. In the case of short, sensitive uterosacral ligaments there is constant backache, located at the sacrum or lower lumbar region. In many of these cases occipital or vertex headache or both are present. With one uterosacral ligament short and sensitive, the pain is commonly referred to the sacroiliac synchondrosis of the short side. Most patients become more or less neurasthenic. The prognosis is bad if the case is of long duration. In the severer cases he has suggested thorough stretching of the short uterosacral or broad ligament under complete anesthesia. After stretching the ligaments until the uterus is freely movable he concludes by curetting and packing. The result is usually good. In one or two cases extirpation of the uterus has been suggested as a last resort for the relief of complete invalidism and the results have been good. Pregnancy may relieve the condition to some extent. It is most common in the unmarried and sterile married.

81. **Neurasthenia.**—MacCoy gives an account of the dispensary treatment of neurasthenia. He remarks that acquired neurasthenia seldom develops much before 25 years of age, and frequently not until long after that period. The neurotic instability of the hereditary is one of the most important factors. The physician must remember that there is a weakness of all the functions, mental, physical and moral, but there is always something to work on. Many cases improve greatly under simple medication and change in the habits of life. He remarks on the importance of a cheerful manner toward these patients and of psychic treatment generally. The treatment is quite as much psychic as pathologic, and he ascribes importance to positive assurances as to recovery and the insistence on certain directions. On the second visit the patients almost invariably report an improvement. Simple sedatives have done much for their sleep, the intestinal canal has been cleaned out and a regularity of life has become more or less established. The reason for their improvement is explained to them. When you have gained their confidence you can begin to make more complete the educational manage-

ment which has been begun so well. Sponge baths at bedtime of tepid water are valuable, as is also electricity, though it is not the important agent that the electric enthusiast would urge. He would forbid tea, coffee and alcohol as a rule, and substitute hot water, cocoa and milk. The patients should take only such food as agrees with them. Neurasthenic patients are very amenable to suggestion and the physician who fails to *avail himself of this* loses a large part of his medical armamentarium.

Western Medical Review, Lincoln, Neb.

September 15.

84 The Treatment of Nevi. John Prentiss Lord.
85 Some Interesting Operative Cases: Suppurating Fibroid of the Uterus; Prolapsus of the Uterus and Bladder; Goiter; Gunshot Wound of the Stomach. J. W. Bullard.
86 *Surgery of the Biliary Passages. Byron B. Davis.
87 *The Advantages of the Davison Ligature to Modern Surgery. A. G. Hamilton.
88 Thrombosis of Arteries Following Secondary Shock; Report of a Case. J. E. Summers, Jr.
89 *A Simple Method of Internal Anastomosis. H. M. Hepperlen.
90 Omental Anastomosis or Operations for Establishing a Collateral Circulation of the Portal Blood; a Successful Schiassi Operation. J. P. Lord.
91 Thrombosis of the Lateral Sinus and Jugular Vein; Abscess of the Lung; Recovery. H. Gifford.

86. **Surgery of the Biliary Passages.**—The following points are emphasized by Davis:

1. A symptom-producing gall bladder so seldom ceases to give trouble without surgical treatment that an early operation before permanent crippling has been done is the safest. 2. In simple, uncomplicated cases of cholelithiasis or catarrhal cholecystitis, with practically a normal gall bladder, cholecystotomy with drainage until infection has disappeared is usually safe and most convenient. 3. Atrophied gall bladders with thick, friable and inelastic walls, those with destruction of more or less of the mucous membrane, and especially those where the cystic ducts are not free, should be removed, as this offers the best chance for complete cure. 4. Stone in the common duct should be removed by incision without suture of the duct. 5. In cases of temporary obstruction of the common duct, cholecystotomy is the safest method of relief until the obstruction disappears. 6. In permanent occlusion of the common duct the best results are obtained by anastomosing the gall bladder with the bowel. 7. The same line of treatment is applicable in all cases of cholecystitis and cholangeitis, whether or not complicated by gallstones.

87. **The Davison Ligature.**—The principal feature of this ligature is described as a simple reverse bowknot tied at each end of the wound, four or five inches from the end of the strand, allowing the ends of the strand to protrude from the angle of the wound, so that it can be untied and pulled out. It is recommended by Hamilton as a convenient and easily removable buried suture. Coarse silkworm gut is the material used, and the ligature offers good chances for certain sterility, accurate layer approximation of the tissue and the removal of buried sutures when healing is completed, capillary drainage from each layer, rapidity of the application, slight scarring of the skin, and all the advantages of permanent buried suture without the danger of further irritation and extrusion of the knot. It has also the advantages of an unabsorbable suture without the danger of sepsis, and without producing a nidus for septic germs from the blood current during absorption.

89. **Intestinal Anastomosis.**—Hepperlen uses a gelatin cylinder over which he sews the gut, inserting a few interrupted sutures through all the coats of the bowel to hold the parts, then using a suture of his own. He uses a fine intestinal silk twenty-four inches long, doubled, with a needle on each end, having the knot where the ends of the silk are tied in the center. He starts the first suture under the mesentery attachment, inserting a needle with each hand at the same time through the two outside coats of the bowel, an eighth of an inch from the cut margins, picking up a loop about one-twelfth of an inch in length, according to the method of Lambord, drawing the parts together and tying them at every stitch, continuing until he has completely encircled the bowel, closing the mesentery opening with the same suture, being careful to pass the needles under the small vessels in the peritoneal coat, so as not to unduly constrict the blood supply. He claims the advantages of simplicity, rapidity of work without handling the parts, firmness of union of the bowel ends. With the aid of the capsule and the suture recommended above, the end-to-end anastomosis may be performed in five to ten minutes.

Medical Examiner and Practitioner, New York.

September.

92 Longevity a Question of Adrenal Sufficiency. J. Leffingwell Hatch.
93 The Clinical Significance of Arteriosclerosis. Reginald H. Fitz.
94 A Study on Light. J. Mount Bleyer.
95 Some Practical Points in Urinalysis. H. Lapere Sayler.

Atlanta Journal Record of Medicine.

September.

96 Some Social Factors That Tend to the Degeneration of the Race and Alcoholism. R. R. Kime.
97 Address, American Laryngological, Rhinological and Otological Society. Dunbar Roy.
98 The Status of the Drug Business in Atlanta. Samuel A. Visanska.
99 The International Quarantine Bureau. J. M. Lindsley.

Journal of Nervous and Mental Diseases, New York.

September.

100 Gigantism and Leontiasis Ossea, with Report of the Case of the Giant Wilkins. (To be continued.) Peter Bassoe.
101 Studies on the Cerebral Cortex in the Normal Human Brain and in Dementia Paralytica. (To be continued.) G. Alfred Lawrence.
102 Cases of Combined Morphin and Atropin Poisoning. Philip Zenner.
103 A Note on Periodic Insanities, with Report of Three Cases of Intermittent Melancholia. Alfred Gordon.

Cleveland Medical Journal.

September.

104 The Ill Health of the Poet Whittier. George M. Gould.
105 The Object to Be Attained by an Organization of Assistant Physicians. A. P. Ohlmacher.
106 The Antitubercular Dispensary. John H. Lowman.

Detroit Medical Journal.

September.

107 Why We Should Not Wait for Group Symptoms Before Undertaking a Paracentesis or a Mastoid Operation, with Demonstration of Specimens. Emil Amberg.
108 The Principles of Medical Ethics. Frank B. Tibbals.
109 A Case of Retained Catheter. L. W. Howk.
110 Septic Mastoiditis without Perforation of the Membrana Tympani. Don M. Campbell.
111 Neurasthenia. A. W. Ives.

Mississippi Medical Record, Vicksburg.

October.

112 Importance of Uncinariasis to the Southern Practitioner. Isaac Ivan Lemann.
113 Two Cases of Typhoid Fever. S. Myers.
114 Report of Foreign Bodies in the Ear and Throat. M. H. Bell.

Virginia Medical Semi-Monthly, Richmond.

September 25.

115 The Serum Precipitation Test for the Identification of Blood Stains. J. W. Mallet.
116 Address of President Before the Medical Society of Virginia J. N. Upshur.
117 Treatment of Rheumatism. A. A. Nefe.
118 Methods to Hasten Epidermization, with Special Reference to Skin Grafting. Stuart McGuire.
119 Chyluria. M. D. Hoge, Jr.
120 Present Status of Serum and Organotherapy. J. McKee Sites
121 Gunshot Wound of Bowels; Seven Perforations; Laparotomy; Recovery. Lewis Holladay.

Carolina Medical Journal, Charlotte, N. C.

September.

122 A Study of Salpingitis. H. A. Royster.
123 Diet in Nephritis from the Chemical Standpoint. H. W. Richardson.

Dominion Medical Monthly, Toronto.

September.

124 *Address, Canadian Medical Association. W. H. Moorehouse
125 The Early Days of Ovariotomy. Matthew D. Mann.
126 *Some Business Aspects of Medical Practice. N. A. Powell.
127 The Country Doctor. J. S. Sprague.
128 *The Renal Aspect of Arteriosclerosis. John Caven.

124.—This article appeared elsewhere. See The Journal of October 10, ¶123, p. 935. See abstract in The Journal, September 12, p. 680.

126.—Ibid., ¶129, p. 935.

128.—Ibid., ¶125, p. 935.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

September 26.

1 *Discussion on Leprosy: Its Etiology, Histology and Treatment. Jonathan Hutchinson and others.

2 Biliary Abscesses of the Liver, with Operation. Leonard Rogers.
3 *Lathyrism. A. G. Hendley.
4 *A Plea for the Proper Medical Supervision of "Refreshments" Purveyed on Railways in the Tropics, with Special Reference to India, and for Better Latrine and Lavatory Accommodation for the Traveling Indian Public. H. D. McCulloch.
5 Varioloid Varicella in Trinidad: Observations on Its Nature, Origin and Mode of Spread Based on the Observation of 4,029 Cases. J. R. Dickson and C. F. Lassalle.
6 *Tropical Malaria and Its Prophylaxis. H. Marcus Fernando.
7 *Plague in Domestic Animals. James Cantlie.
8 Notes on Operations for Conical Cornea. A. Stanford Morton.
9 Extraction of Cataract in the Capsule. Henry Smith.
10 Subconjunctival Injections of Tuberculin T. R. in the Treatment of Interstitial Keratitis. A. Darier.
11 On the Treatment of the More Serious Syphilitic Diseases of the Eye. A. Darier.
12 A Discussion on Eye Changes in Relation to Renal Disease. Edward Nettleship and others.
13 The Corneal Lesions of Acquired Syphilis. Sydney Stephenson.
14 The Use of Retinal Extract in Atrophic Retinæ. Robert W. Doyne.
15 Epithelial Plaques of the Conjunctiva. W. T. Lister and W. I. Hancock.
16 The Mechanism of Accommodation in Man. Karl Grossmann.
17 The Treatment of Concomitant Convergent Strabismus. Gustavus Hartridge.
18 Convergent Squint: Methods of Preserving or Restoring the Sight of the Deviating Eye and of Establishing Binocular Vision. Claud Worth.
19 Fixation of the Eye During Operation. J. Tatham Thompson.
20 An Operation for Ptosis. H. Collen Ensor.
21 Preliminary Note on the Pathology and Diagnosis of Spring Catarrh. H. Herbert.
22 Further Note on the Superficial Punctate Keratitis of Bombay. Major H. Herbert.
23 Modified Mules' Glass Ball for Use After Removal of the Eye. Adolph Bronner.
24 Knee-jerk Phenomenon in Interstitial Keratitis. N. Bishop Harman.
25 An Improved Operation for the Relief of Ptosis. N. Bishop Harman.

1. **Leprosy.**—Hutchinson discredits the contagion of leprosy, claiming that experimental inoculation with one very dubious exception has always failed. It is infrequently transmitted from the husband to the wife. It is of widespread prevalence where it occurs, but nowhere common, and nothing like epidemic prevalence is ever observed and large sections of the population are almost wholly exempt. Attendants in leper hospitals never contract the disease. Lepers residing in England, France and America at the present day never become foci from which the disease spreads. When leprous communities are removed to a distance the disease dies out and when the social conditions are changed the same is true. He points out the arguments in favor of his fish theory, admitting that it is not the quantity but the quality that is responsible. He lays it to decayed or badly cured fish instead to the fish *per se*. Among the arguments he offers are that the fish hypothesis explains its antiquity, its widespread prevalence in local districts, and its excessive incidence in connection with the Roman Catholic religion; explains the dying out of the disease in connection with the advance of civilization and its persistence in certain localities where a large consumption of poorly cured fish exists, as also its great prevalence in the middle ages and its absence from mid-Russia. It also accounts for *de novo* and sporadic cases.

In the discussion which followed by Drs. Manson, Sambon, Cantlie, Hillis and others, the fish hypothesis was not generally favored.

3. **Lathyrism.**—This disorder, which is characterized by a paralysis of the lower limbs, with spasm of the thigh adductors and exaggeration of the reflexes without disturbance of sensation, bladder or rectum involvement or participation of the upper limbs of the trunk, is discussed by Hendley, especially as relating to its etiology. He comes to the conclusion that it is a form of intoxication not exclusively due to the diet of lathyrus, which only produces a predisposition to it. Its immediate exciting cause is exposure to cold, rain and damp weather. This explains the immense predominance of males affected with the disease and its occurrence in the rainy season when they are out and exposed in their work. It does not seem to be dangerous to life, but the paralysis is not curable. The spinal cord does not seem to be involved as a rule, though a softening above the lumbar enlargement has been found in one case by Scheube.

4. **Railroad Refreshments in the Tropics.**—The danger of taking meals at railroad stations, etc., the need of better latrine and lavatory service, especially in India, are emphasized by McCulloch, who gives instances of the evils which he says exist. Even the drinking water and every kind of refreshment is likely to be infected.

6. **Tropical Malaria.**—The methods of meeting tropical malaria, which is usually of the severe type, are discussed by Fernando, who finds that destroying the mosquito larvæ over sparsely populated districts is impracticable, and mosquito-proof houses on a large scale are also impossible for the natives, whose simple mud houses generally cost them practically nothing, and they can afford no better. He thinks in dealing with malaria in a district the following points should be insisted on:

> 1. A prompt search for cases of fever as fast as they occur with efficient treatment. If necessary, or otherwise practicable, malaria should be included in the list of infectious diseases whose notification to the local sanitary authority is compulsory. 2. The continued treatment of fever cases after the attack is over to prevent relapses. 3. The systematic treatment, especially during the non-fever season, of the cases of anemia and other forms of debility induced by chronic malarial poisoning. The above measures represent the least that can be expected from a sanitary authority in the treatment of malaria in an infected district, and it is gratifying to observe that when such measures are effectively carried out a great deal will have been done to exterminate the disease. The surest prophylaxis consists in efficient treatment.

7. **Plague in Domestic Animals.**—Cantlie points out the dangers of plague in the lower animals, which render the question of its prophylaxis a much broader one than has been heretofore considered. Not merely domestic animals may be infected, but marmots, bats, pigeons and probably many others are likewise susceptible.

The Lancet, London.

September 26.

26 *Perforation in Typhoid Fever, with an Account of Two Cases of Recovery After Surgical Treatment. Hector W. G. Mackenzie.
27 Some Problems Arising from the Variations in the Development of the Skull and the Brain. Johnson Symington.
28 A Case Presenting Signs of Pulmonary Stenosis During Life, Unexplained by the Necropsy, with Some Remarks on Diagnosis. W. L. Ascherson.
29 A Note on Tonsillar Enlargements and Their Treatment. Lawrie H. McGavin.
30 *On Some Uncommon Forms of Neuritis of the Upper Limb, with an Unusual Etiology. W. B. Warrington.
31 Remarks on Three Cases of Acute Intestinal Obstruction. T. Crisp English.
32 A Note on a Case of Puerperal Septicemia Treated by Antistreptococcic Serum. John M. Mackenzie and W. B. Blandy.
33 *A Clinical Comparison of the Maternal Pelvis and of the Fetus in Europeans, Eurasians and Bengalis, and the Enunciation of a New Law, in Accordance with Which the Size of the Child at Birth Is Determined. Clayton Arbuthnot Lane.

26. **Typhoid Perforation.**—This condition, as here pointed out by Mackenzie, is much more frequent than is sometimes thought to be the case, occurring as it does in 3 or 4 per cent. of all cases and causing at least 25 per cent. of deaths. Mackenzie shows that it may occur even in the mildest cases, most frequently, however, in males, and that it is apparently most frequent about the third or between the second and fourth weeks. Its site is usually in the last twelve inches of the ileum, in which the ulceration is most severe. The symptoms are more or less characteristic. He discusses them at some length and concludes that every case of typhoid fever should be looked on as one of possible perforation for which the medical man should be prepared. He recommends a careful study of the schedule of instructions drawn up by Osler as to the duty of the nurse in watching the pulse, condition as to pain, condition of the abdomen, whether distended, flat or contracted, the presence or absence of respiratory movement, tenderness, rigidity of muscles, spasm, temperature, respiration, its frequency and character. If the physician suspects perforation he would do well to at once summon a surgeon, the one he has selected as operator, and to see that provision is made against shock, with sufficient hot water bottles, blankets, stimulants, etc., with suitable table and good light for operating and other means, especially in private houses. A number of cases are reported. The prognosis is certainly better than it used to be looked on, as large a proportion as one-third having been recorded as recovered in some statistics.

30. Neuritis of the Arm.—The cases reported by Warrington illustrate Erb and Duchenne's palsy of the upper part of the brachial plexus and Klumpke's palsy of the lower part, the uniradicular paralysis described by Buzzard where the lesion is limited to one of the nerves forming the brachial plexus; a case of monoplegia and one of localized multiple neuritis, a paralysis of the fifth peripheral nerve and a professional or occupation paralysis, which in some cases is due to actual neuritis, and others apparently the result of pressure or overuse.

33. The Maternal Pelvis.—Lane has studied the proportions of the maternal pelvis in the European, Eurasian and Bengalis, and formulates from the results of his studies the following law: "The child grows *in utero* in such a manner and at such a rate that at full term his size is proportional to that of the mother's pelvis through which he has to pass in order to be born." The weight of the child and its size at birth has a distinct relation to the pelvis, and the biparietal diameter of the child increases correspondingly with the conjugate diameter of the pelvis through which it will ordinarily pass at birth. The mechanism by which this law is maintained is, he thinks, that of ordinary natural selection.

Journal of Tropical Medicine, London.

September 15.

34 An Account of Anti-malarial Work Carried Out with Success in Selangor, One of the Federated States of the Malay Peninsula. (To be continued.) E. A. O. Travers.
35 Municipal Sewerage. Major F. Smith.
36 A Breeding Place of Certain Forest Mosquitoes in Malaya. G. F. Leicester.

Annales de Dermatologie et de Syphiligraphie, Paris.

Last indexed page 341.

37 (IV, No. 7.) *Le liquide céphalo-rachidien des syphilitiques en période secondaire. P. Ravaut.
38 *Le liquide céphalo-rachidien des tabétiques. G. Milian.
39 De l'adénome sébacé circonscrit. C. Audry.
40 Les recherches récentes sur le sang dans la syphilis. P. Pagniez.

37. Cerebrospinal Fluid in Secondary Stage of Syphilis.—Ravaut gives the particulars of 84 cases of secondary syphilis in which the cerebrospinal fluid was examined. They indicate that every intense and persisting cutaneous manifestation in syphilis generally coincides with a reaction on the part of the nervous system. In most of the patients there were no symptoms, except the findings in this fluid, to suggest the parallel involvement of the nervous system. In 34 cases with slight and transient cutaneous manifestations the cerebrospinal fluid was normal in all but 3, while in 36 with pigmented or papulous syphilides the fluid showed an evident reaction. Possibly a second examination might have shown that these exceptions, too, conformed to the rule. The findings in the cerebrospinal fluid paralleled the course of the cutaneous affection, but did not seem to bear any relation to the frequency or intensity of the headaches observed in some cases. He classes the findings as follows: marked reaction, with 20 to 150 leucocytes in the field; moderate, with 7 to 20; slight, with 4 to 6 leucocytes, and negative, with none, or at most 2 or 3 leucocytes to the field. They were exclusively lymphocytes. In 3 cases a few polynuclear cells could also be discovered and occasionally a few large mononuclears were found among the lymphocytes, but took the stain poorly. No red corpuscles were ever found. It is impossible to draw conclusions from the facts cited, but they demonstrate how promptly and how insidiously the nervous system is affected by the syphilitic virus. They also apparently confirm Brissaud's theory that the virus has a special affinity for the ectoderm, and suggest the necessity for energetic specific treatment, admitting that these reactions are a new symptom of syphilis in full activity, demanding immediate treatment.

38. Cerebrospinal Fluid in Tabes.—Milian has been studying the behavior of this fluid in tabes, and his findings in 20 cases show that stationary tabes with a tendency to latency has a normal cerebrospinal fluid, while there is slight lymphocytosis in those cases of tabes of slow progress, the syphilitic infection of remote date. Pronounced tabes with ataxia is accompanied by decided lymphocytosis, and likewise incipient tabes consecutive to recent infection. The lymphocytosis in tabes does not seem to be modified by mercurial treatment, contrary to what is observed in the lymphocytosis of hemiplegia from arteritis, which rapidly improves under treatment. This fact seems to support Fournier's assertions in regard to the parasyphilitic nature of tabes.

Presse Medicale, Paris.

41 (No. 75.) De l'hérédité mitrale. E. Hirtz.
42 La dysenterie. Maladie septicémique. M. Guibaud.
43 Relations Between Diabetes and Acromegaly and Exophthalmic Goiter. A. Lorand (Carlsbad).—Sur les rapports du diabète avec l'acromégale et la maladie de Basedow.
44 *Detection of Koch Bacilli in Pathologic Products. E. J. Masselin.—Recherche des bac. de Koch dans les produits path.

44. Detection of Tubercle Bacilli by Inoscopy.—Masselin corroborates Jousset's assertion that his inoscopy allows the detection of tubercle bacilli even very scantily present in the organic fluids. He reviews his extensive experience with it, and adds that if the results are negative he never dismisses the case as positively non-tuberculous until inoculation of guinea-pigs has also resulted negatively. In Behring's address below, inoscopy is also referred to as a notable progress. [The technic was given in THE JOURNAL, page 546, paragraph 46, of the last volume. It reveals the bacilli in organic fluids in which they have hitherto escaped detection. It is based on the fact that bacteria become entangled in the fibrin of organic fluids. By dissolving out the fibrin with a pepsin digesting mixture the bacilli are set free and can be obtained by centrifuging for examination under the microscope.—ED.]

Centralblatt f. Chirurgie, Leipsic.

Last indexed page 641.

45 (XXX, No. 30.) Incision for Appendicectomy *à froid*. E. Beer (New York).—Ueber eine Schnittfuhrung für Resektion der Appendix im anfallsfreien Stadium.
46 (No. 31.) *Ueber die Operation der puerperalen Mastitis. E. Hopmann.
47 (No. 32.) *Zur Radikal-Operation nach Lotheissen des Schenkelbruches (of femoral hernia). J. Gilli (Graz).
48 (No. 33.) *Eine neue Operations-Methode des Caput obstipum. L. Wullstein (Halle).
49 Modification of Maydl's Operation for Exstrophy of Bladder. P. A. Müller (Dresden).—Abänderung der Borelius'schen Modifikation der Maydl'schen Operationsmethode bei kong. Blasenektopie. (See also No. 37.)
50 (No. 34.) *New Method of Reducing Posterior Dislocation of Hip Joint. J. Elgart (Brunn).—Neue Repositionsmethode für hintere Hüftgelenkverrenkungen.
51 (No. 35.) *Turning Back a Costal Arch Flap. G. Marwedel (Aachen).—Die Aufklappung des Rippenbogens zur Erleichterung operativer Eingriffe im Hypochondrium und im Zwerchfellkuppelraum.
52 Cholecystenterostomie verbunden mit Enteroanastomose. D. Maragliano.
53 (No. 36.) *Zur operativen Herzmassage (massage of heart). P. Sick (Kiel).
54 *Transactions of Thirty-second German Congress of Surgery.
55 (No. 37.) *Technik der Radikal-Operation des Schenkelbruches (of femoral hernia). P. Herzen (Moscow).
56 (No. 38.) *Zur Anwendung des Adrenalins bei anesthesierenden Gewebs-Injektionen. H. Braun (Leipsic).

46. Operation for Puerperal Mastitis.—Hopmann describes the method of operative treatment of puerperal mastitis followed by Bardenheuer of Cologne. It avoids any disfigurement; leaves the milk glands nearly intact, especially those in the anterior portion of the breast, while the abscesses can be thoroughly evacuated and drained. A semi-circular incision is made around the lower half of the base of the breast, which is detached with the fingers from the fascia of the pectoralis major and turned back like a large flap. This allows ample access to the abscesses, which are opened by radial incisions and evacuated. A wide drain tube is left in each pocket and the breast is replaced. As the drains project in the most favorable manner for drainage at the lowest points, the abscesses heal rapidly. The only trace of the intervention is usually hidden by the overhanging breast. He has recently operated by the same technic in two cases of bursitis prepatellaris, making the incision below the knee, turning back the semicircular flap of soft parts and extirpating the bursa from below.

47. Radical Operation of Femoral Hernia.—Gilli mentions that he has discovered that operation is remarkably facilitated by cutting across Poupart's ligament and the falciform process (superior cornu). This not only favors operative intervention, but materially shortens the time required.

48. Operation of Caput Obstipum.—Wullstein not only relieves the caput obstipum by severing or partially removing the contracted muscle, but does not regard the operation as completed until he has shortened the unduly long, stretched part of the muscle, thus obviating the necessity for tedious after-treatment to accomplish this. He shows in a cut how easily the muscle can be shortened by taking up a loop in it, suturing the loop flap by sutures along the edges and occasional ones in the center of the flat expanse.

50. Reduction of Dislocation of Hip Joint.—Elgart has the patient recline on the floor and places the dislocated limb over his own knee as he kneels beside him on one knee at a right angle to the patient's body. By the leverage thus obtained reduction according to Kocher is rendered much simpler and easier.

51. Costal Arch Flap for Operations on Hypochondrium.—Marwedel makes a curved incision parallel to and a short distance from the costal arch, extending it from the ensiform process to below the tenth rib. The three ribs above are then divided at their cartilaginous union after pushing the muscles out of the way. It is then easy to turn back the soft parts and the ribs, leaving a broad opening into the cavity below, exposing the liver or the upper part of the stomach including the cardia and the subdiaphragmatic space. In two clinical cases in which this plan was followed the flap was cut and raised in a few minutes. The single abdominal wound healed by primary intention and seven weeks after the intervention the ribs were as solid as before.

53. Resuscitation by Massage of Heart an Hour After Death.—Sick reports that a lad of 15 was being operated on Dec. 13, 1902, at the Kiel clinic, on account of tuberculous peritonitis, when heart action and respiration ceased. Artificial respiration and König-Maas massage of the heart restored the respiration for a single minute or two, but it then subsided again, and after thirty minutes the youth was still cyanosed, pulseless, no respiration, the entire body growing colder and colder. The heart was then exposed by a Rotter incision and, forty-five minutes after the first signs of disturbance, massage was applied directly to the heart, supplemented by warm compresses. After fifteen minutes the heart gave signs of life, and in fifteen more minutes was beating regularly. Respiration was resumed, the pupils contracted to normal, the color returned and the pulse became good, although rather frequent. The pericardium was then sutured and the thorax flap replaced and sutured over the tampon. Two hours later the youth had regained consciousness and complained of thirst and dyspnea; respiration 60, pulse 144. Under camphor and saline infusion the condition remained about the same for twenty-four hours. The speech was indistinct, hurried but intelligible. Then symptoms of collapse were observed, the dyspnea increased and death ensued after three hours of coma. Signs of slight fibrinous pericarditis were found at the autopsy, and of old pleuritis, fresh recent tumefaction of spleen and liver, with tuberculosis of peritoneum and mesentery in an advanced stage. Sick remarks that the resuscitation might have been permanent in a subject less severely undermined. The action of the chloroform on the heart had evidently been magnified by the shock and the altered conditions in the circulation entailed by the laparotomy and evacuation of the ascites.

54a. Action of Local Stimulation.—Wessely describes experimental research on the eyes of rabbits which show that the application of warm compresses or local irritation induces a hyperemia accompanied by the rallying to the spot of the defensive antibodies in the serum. The proportion of albumin in the aqueous humor rose constantly from 1/40 per cent. to 1 and 2 per cent., and the agglutinating power increased ten to twenty fold. The same results were observed in the conjunctiva, which proved a particularly favorable field for these investigations. He notes that the proportion of albumin, etc., did not rise when the parts had been previously treated with adrenalin, thus confirming the fact that the phenomenon is connected with the hyperemia. It is evidently the secret of the benefits from hyperemia in inflammatory conditions.

54b. Artificial Substitution of Blood.—Küttner is convinced by the results of the researches of Locke and Kuliabko that a fluid, to be an efficient substitute for the blood, must contain oxygen. Experiments on animals showed that much more than the ordinarily fatal loss of blood was well tolerated by rabbits if the substituted solution was impregnated with oxygen. He illustrates a mechanism for the agitation of salt solution with oxygen to effect this impregnation.

54c. Improved Anesthesia of Nerve Trunks.—Braun's announcement in regard to the manner in which the action of cocain is magnified by the addition of adrenalin has already been mentioned in these columns. He asserts that five drops of the 1 per 1,000 solution of adrenalin is ample to add to a .5 per cent. solution of cocain to ensure perfect anesthesia of the superficial nerve trunks. For the large subfascial nerve trunks a 1 per cent. solution of cocain may be necessary. Sometimes thirty minutes may elapse before the nerve conductibility is entirely suspended, but in the knee or elbow the endoneural injection is followed at once by anesthesia. He advises to apply the constricting band—if one is required—only just before commencing the operation. The anesthesia obtained by this combination of adrenalin with cocain or eucain lasts from two to five hours.

55. Radical Operation for Femoral Hernia.—Herzen describes the technic with which he has been very successful. After the hernial sac has been tied and removed and the stump reduced, he detaches the femoral vein and draws it to one side and Poupart's ligament upwards. He then dissects a flap of periosteum from the upper aspect of the pubis about the width of the femoral canal and about 1 to 1.5 cm. long, its base on the pectineus. This flap is then detached from the bone and turned back downward. Two to four small holes are then drilled through the pubis in such a way that the drill emerges always in the part exposed by the raising of the flap. The two ends of a bronze-aluminum wire are then passed from behind forward through Poupart's ligament and through two of these holes. By pulling on the wire the ligament is brought into intimate contact with the exposed part of the pubis. The flap of periosteum is then replaced and fastened with a couple of stitches. By this means the femoral ring is entirely closed while the ligament has taken its place, reinforced by the periosteum flap. He has thus treated a consumptive patient, and in spite of his violent coughing, the results of the operation have been perfect, healing rapidly with absolute freedom from any tendency to recurrence of the hernia.

56. Application of Adrenalin in Anesthetizing the Tissues.—Braun proclaims that experience with several hundred patients has confirmed his previous assertions in regard to the great value of combining adrenalin with cocain. He warns now in regard to the dosage, as too large doses induce such pronounced anemia that it is impossible to ligate the vessels, and when the anemia gradually passes away after-hemorrhage is possible and liable. This after-hemorrhage is not due to the adrenalin, but to the fact that during the anemia there can be no question of arresting any hemorrhage. Consequently it is imperative to use only the amount of adrenalin necessary to enhance the anesthetic action of the cocain or eucain, and not to suppress all hemorrhage from even the larger arteries, causing them to contract to such extent as to close their lumen. A good combination is two to five drops of the 1 per 1000 adrenalin solution to 100 c.c. of a 1 per cent. solution of cocain or beta eucain. The proportion is then .00007 to .00017 per cent. of the adrenalin. Application of this mixture blanches the parts, but the larger arteries still bleed and can be ligated. The influence on the anesthesia is equally pronounced with these small as with large amounts. In extracting teeth or for endoneural injection two drops of the adrenalin solution are ample to each c.c. of the cocain or eucain solution. He has never used more than five drops, equivalent to about 1/6 mg. of adrenalin, in any instance.

Centralblatt f. Gynaekologie, Leipsic.

Last indexed page 939.

57 (No. 36.) Simulated Extra-uterine Pregnancy. C. Schambacher.—Zur Frage der vorgetäuschten Extrauterin-Graviditāt.

58 Rumpf's Operating Table. M. Wegscheider.—Der Operationstisch nach Dr. R.
59 (No. 37.) Modified Axial Traction Forceps. R. Freund.—Eine modifizierte Tarnier'sche Achsenzugzange.
60 Der sogenannte weisse Infarkt der Placenta. G. Schickele.
61 Zur Histogenese des Chorio Epithelioms. L. Pick.
62 (No. 38.) Shall We Feel at Once Whether the Cord Is Around the Neck After Head Is Born? B. S. Schultze (Jena).—Soll man gleich nach geborenem Kopfe danach tasten ob die Nabelschnur umschlungen ist?
63 Chloroform-Tod oder akute Urämie? F. Hammer.
64 Artificial Feeding of Infants. W. Zangemeister (Leipsic).—Ueber die künstliche Ernährung von Säuglingen.

Deutsche medicinische Wochenschrift, Berlin and Leipsic.

65 (XXIX, No. 39.) *Origin of Pulmonary Tuberculosis and the Combating of Tuberculosis. E. von Behring.—Ueber Lungenschwindsuchtentstehung und Tuberkulosebekämpfung.
66 Ueber das Verhalten der Typhus-Bacillen in der Milch und deren Produkten. R. Bassenge (Institute for Infectious Diseases, Berlin).
67 Der Negri'sche Erreger der Tollwuth (hydrophobia germ). Schüder.
68 Ueber die therapeutische Anwendung des Chlor-Baryums. v. *Tabora.*
69 Curability of Atrophy of Bone. E. Rose.—Die Heilbarkeit der progressiven totalen Knochen-Atrophie.
70 Critical Study of Sex-Determination Theories. C. Benda.—Das Problem der geschlechtsbestimmenden Ursachen.
71 Zur Hygiene des evangelischen Abendmahls (ritual communion). Focke.

65. Origin of Pulmonary Tuberculosis and Means of Combating It.—The Journal summarized on pages 1178 and 1266 of the last volume von Behring's important announcements in regard to the immunization of cattle based on the fact that the epithelial lining of the alimentary canal is not completely developed during early infancy, the gaps allowing the passage of albumin and bacteria like any very porous filter. The present article was an address at the Naturforscher Congress, in which he proclaims that time and experience have more than confirmed his previous statements. He reviews the brilliant results of the practical application of his method of immunizing cattle as carried out by stock raisers and dairy men, both in Germany and elsewhere, and states that the Prussian government is now considering the propriety of assuming the task of immunization of cattle by this method as an official department. Until recently Behring has carried it on from his private means. He maintains the identity of human and bovine tubercle bacilli, and preaches that the main source of phthisis occurring at any time during life is from infection through the milk taken during infancy, whether the tubercle bacilli in the milk are of human or bovine origin. The presence of a coughing consumptive in a family almost inevitably results in the infection of the infants by inhaling the germs or by their getting into the milk or on the vessels used. This is the secret of the so-called heredity and predisposition to tuberculosis in the members of a family. The infection is post-genital, not inherited. It may remain latent for years or for life, but under predisposing conditions it may develop into pulmonary tuberculosis, which is thus traced to infection in infancy. And it is to this age that we must apply not only prophylactic but immunization measures such as he has so successfully practiced in cattle. Immunity can be conferred by isopathic immunization or by antitoxin treatment. The former is the method followed with cattle, but is not feasible for children on account of its dangers at present. These will be obviated, however, if it proves possible to confer immunity by ingestion of the bacilli *per os* instead of the more dangerous intravenous route now in use. The prospects are more encouraging for immunization of infants by the antitoxin method. His hopes are becoming stronger and stronger, he says, that it will prove possible to confer immunity on infants by giving them the milk of highly immunized cows. The immunity thus obtained is not very lasting, but it may be supplemented by immunizing procedures with the living virus, such as have proved effectual in the prophylaxis of other diseases. One of the problems he is at present studying is to devise a means to preserve the antitoxin in the milk of the immunized cows so that it will keep and bear transportation. He speaks with commendation of Jousset's method of inoscopy as an invaluable means of detecting tubercle bacilli in the organic fluids. (See paragraph 44 above.) In regard to the tuberculin test, he mentions casually that Koch has reacted positively to the test, and that he himself ten years ago after a dose of 4 mgm. reacted with fever and was confined to bed for several days, thus convincing him of the tuberculous infection of his own body. He explains the reaction to tuberculin as the result of phenomena of coagulation and agglutination induced by the contact of this preparation of tubercle bacilli with the otherwise soluble antibody produced in the body by the action of the tuberculous lesion. He is inclined to believe that the smaller arteries in the vicinity of the infectious focus are the seat of the elaboration of this antibody. He reaffirms with emphasis that tuberculous infection is far from meaning inevitable phthisis. A combination of several factors is necessary for this result. He cites as an example the experience of Dr. M. Schmidt of Frankfurt, who, in his forty years of practice, has examined untold numbers of cases of tuberculosis of the larynx, and neither he nor any of his assistants have shown evidences of infection. Behring is hopeful of the day when immunization of man and cattle against tuberculosis will banish the sanatoria, etc., from the land as Jenner's vaccination has swept away the old-time smallpox hospitals in every town, but explicitly states that he has nothing definite yet to propose as far as man is concerned.

Muenchener medicinische Wochenschrift, Munich.

72 (L, No. 36.) *Does the Combustion of Sugar Entirely Cease After Removal of Pancreas? H. Lüthje.—Ist die Zerstörung des Zuckers nach Pankreas-Exstirpation vollständig aufgehoben?
73 *Influence of Concentration of Urine on Absence of Albumin Reaction. B. Hallauer.—Ueber den Einfluss der Konzentration des Harns auf den Ausfall der Eisweissreaktion.
74 *Zur Kenntniss des Gas-Gangrän. Dansauer.
75 2 Fälle chronischer zonen-förmiger Hauterkrankungen (cutaneous affections). F. Lommel.
76 *2 Fälle von Pons-Erkrankung. H. Steinert.
77 *Zur Diagnose und Therapie der Diphtherie. Curtius.
78 Acetozone Poisoning After Application of a Celluloid Cast. Cossmann.—Azetonvergiftung, etc.
79 *Tuberculosis Infection by Way of Intestines. L. Sorger.—Zur Entstehung der Tuberkulose vom Darm aus.
80 Infant Mortality from Social-Hygienic Standpoint. Ascher.—Zur Bekämpfung der Säuglingssterblichkeit vom sozial-hyg. Standpunkte.
81 (No. 37.) *Absorption of Lime in Relation to Rachitis. M. Pfaundler.—Ueber die Kalkadsorptiontierischer Gewebe und über die Grundlagen einer modernen Rhachitis theorie.
82 Zur Klinik des Adams-Stokes'schen Symptomenkomplexes. du Mesnil de Rochemont.
83 Perityphlitis und Leukocytose. R. Gerngross.
84 *Cerebral Bladder Disturbances. M. Friedmann.—Zur Kenntnis der cerebralen Blasenstörungen und namentlich des Rindenzentrums für die Innervation der Harnblase.
85 Function of Bladder and Rectum. E. Hirt.—Zur Lehre von der Funktion der Blase und des Mastdarmes.
86 *Improved Aspirating Pipette. E. Ebstein.—Ueber eine Verbesserung an kalibrierten Saugkapillären.
87 Improved Technic of Intubation. A. Rahn.—Ueber meinen Tubus und über das Herstellungsverfahren der Tuben überhaupt.

72. Elimination of Sugar After Extirpation of Pancreas.—Lüthje mentions in the first place that he was much surprised to find traces of the pancreas still left after what he supposed was absolutely complete extirpation. The microscope revealed particles of pancreas tissue *in situ*, which suggests that the contradictory results obtained in previous research may have been due to retention of more or less numerous scraps of the parenchyma. His experiments were all made on dogs, and even after complete removal of the pancreas the sugar did not disappear entirely from the urine until the animals had been kept for a time on a starvation nitrogen diet. The slightest addition of albumin to the diet—after the animals had been freed from sugar by being kept on the starvation diet—was immediately followed by the reappearance of sugar in the urine.

73. Tests for Albumin in Concentrated Urine.—Hallauer points out that the reaction to the albumin tests varies with the concentration of the urine, and consequently the latter should be diluted in case of a negative result to the test before accepting it as positively negative. After reduction of the urine to half its volume the most sensitive tests ceased to give the reaction previously obtained.

74. Gas Gangrene.—Dansauer reports a case and reviews the publications of others on the subject, and also the results of personal experimental research, concluding that the common colon bacillus is capable of inducing gas gangrene in the *non-*

diabetic living organism. It is not able to do this alone; its action is saprophytic and dependent on a primary local or general injury of the tissues from some nutritional disturbance either from trauma or deranged metabolism.

76. **Focal Affection in the Pons.**—In Steinert's 2 cases the presumptive diagnosis of a focal affection in the pons was based on a series of symptoms which he describes at length. The patients are still living and the diagnosis has not been anatomically confirmed. In the first case the paralysis of all the branches of the facialis was accompanied by hemiparesis, the Babinsky sign, hemianesthesia and violent hemihyperidrosis, but the pathognomonic symptom was the paralysis of certain ocular muscles for certain conjugated movements, normal for the rest. There was also transient paralysis of the palate on one side and absence of lachrymal secretion. Some of these symptoms subsided after a time and confirmed the assumption of an acute encephalitis pontis which had healed, leaving a defect. The inflammation was consecutive to a suppurative dental periostitis. Damianos has recently called attention to the possibility of a suppurative thrombophlebitis of the sinus cavernosus as a sequel to periostitis in the jaw. Among the symptoms presented by the second patient were complete lax hemiplegia, the Achilles jerk absent on the right side, the abdominal reflexes absent on both sides and the Babinsky sign present. After a time the Strümpell sign became evident on both sides. The gait was never that of a hemiplegic, but suggested that of ataxia. The patient was also annoyed by a sensation of heaviness in the entire right side, especially in that side of the head, and the atrophy of the muscles was more pronounced than usually observed in hemiplegia. The ocular disturbances were the same as in the first case, and vision was not impaired in either. [E. Schwarz of Riga reviews the differential diagnosis of pons affections in the *St. Petersburg Med. Woch.*, No. 35, and proclaims that absence of the pupil reflex on one side in the early stages testifies in favor of an intrapontine lesion, when noted in a syndrome suggesting involvement of the base of the brain. He describes 2 cases in detail with postmortem findings in one. The ocular symptoms are noted in the Oct. *Ophth. Record*.—Ed.]

77. **Thirteen Years' Experience with Diphtheria.**—Curtius is an ardent advocate of preventive serum treatment, and mentions among other points the comparatively slight disturbance of the general health at first in comparison with that observed in tonsillitis. He also refers to the confluent character of the exudation, which very seldom occurs in dots, but usually in masses. He orders the children to spit into a dish of water and in this way has often detected scraps of false membrane as the first sign of diphtheria. His experience has confirmed the great value of local applications of Löffler's solution applied on cotton and pressed into the spot after removal of the membrane, holding it in contact for ten seconds. The formula is menthol 2.5 gm.; dissolve in toluol 9 gm., alcohol 15 gm. and liq. ferri sesquichlor. 1 gm. He has found this very effectual even when serum treatment was impossible for any reason, but insists on the importance of removing the membrane before applying it. If the child will not open its mouth he pushes the lower lip over the lower teeth to keep the mouth open. He regards gargles as useful merely for the mechanical removing of bacteria and remarks that clear water is as good for this purpose as an antiseptic. He urges an abundance of nourishing food and strict cleanliness, as repetition of the infection is not impossible. As a homely measure to supply steam when the child is breathing with difficulty he throws a sheet over the bed, held up by barrel hoops or something of the kind, and generates steam by pouring water over a hot brick. This moist heat softens the rigid infiltrated tissues in the throat and stimulates the circulation in the parts, possibly also loosening the membranes.

79. **Tuberculosis Infection By Way of Intestines.**—Sorger states that he has fed dogs for months with tuberculous sputa mixed with their food, but always with negative results.

81. **Absorption of Lime by the Tissues in Rachitis.**—Pfaundler argues to prove that newly formed osteoid tissue does not possess any special affinity for the anorganic constituents of the true bone formed later. This affinity develops in the later course of the transformation of the osteoid tissue. A certain form of heteroplasia of the osteoid tissue is thus necessary for calcification, and it is further possible that under the influence of hydrolytic processes the elements of the osteoid tissue become able to take up lime. In calcification, acid radicals, and especially phosphoric acid, are found as well as lime. If these premises are correct the essence of rachitis may prove to be a defective transformation of the elements of the osteoid tissue into lime catchers, an inhibition of the normal biochemical tissue transformations, possibly in the line of autolytic processes. The unmistakable benefit derived from phosphorus in rachitis may be due to its favoring the hydrolytic splitting of the nitrogenous tissue-forming elements.

84. **Cerebral Bladder Disturbances.**—Friedmann had occasion to observe a boy of 9 who was affected with an almost isolated disturbance in the innervation of the bladder in consequence of a brick falling from a height on his head. The disturbances continued a long time, but finally subsided. From study of the case he assumes that the brick must have injured a point in the brain which serves as a center for the innervation of the bladder. The spot was close to the edge of the posterior central convolution, directly adjacent to the upper parietal lobule. The fact that the hand and arm were not affected to any extent shows that the center in question must be small and circumscribed, as the centers for the hand and arm are in close proximity to the point of the injury.

86. **Aspirating Pipette.**—In drawing blood for examination Ebstein uses a Pravaz syringe instead of a rubber bulb to aspirate the blood, applying the syringe to the end of a short, stiff rubber tube attached to the pipette. He remarks that we do not realize the inconveniences of the present methods of aspirating with a bulb until they are abolished by use of the syringe.

Therapie der Gegenwart, Berlin.

Last indexed page 941.

88 (No. 7.) *Fluids in Diet of Heart Disease. F. Kraus—Ueber die dietetische Behandlung des Wasserhaushaltes bei der Behandlung Herzkranker.
89 *Buttermilk in Infant Feeding. E. Kobrab.—Buttermilch als Säuglingsnährung in der poliklinische Praxis.
90 (No. 8.) *Ueber die specifische Behandlung des Morbus Basedowii. Burghart and Blumenthal.
91 Review of Modern Methods of Outlining the Heart. de la Camp.—Zur Kritik der sogen. modernen Methoden der Herzgrössenbestimmung.
92 *Ueber Akromegalie. L. Huismanns.
93 *Casuistische Beitrag zur Eisenlichtbehandlung (Treatment with Iron Light). E. Clasen (Hamburg).

88. **Fluids in Diet in Heart Disease.**—Kraus makes a practice of occasionally restricting the intake of fluids at periodical intervals. If the subject is accustomed to take about 1500 c.c. he limits him to 1200, or even 1000 c.c., returning then to 1500 c.c. Many persons adapt themselves without trouble to as little as 1000 c.c. Valvular defects are not benefited to such an extent by this dietetic restriction of the fluids as cases of chronic insufficiency of the heart, especially those in which the compensation is just beginning to be inadequate.

89. **Buttermilk in Infant Feeding.**—Kobrak's experience with 66 cases at Neumann's clinic at Berlin impels him to recommend buttermilk as a valuable aid for the feeding of infants of the class that apply to the dispensary. It is especially indicated for weakly infants, the prematurely born and those with chronic atrophy and in moderate or mild cases of intestinal catarrh. Also when there is much vomiting.

90. **Specific Treatment of Exophthalmic Goiter.**—Burghart describes a preparation of condensed milk from thyroidectomized goats. It is a sweetish powder and is sold under the name of "rodagen." He has found it very beneficial in the treatment of exophthalmic goiter, either by the mouth or by subcutaneous injection. In 2 of the 10 cases he reports the eyes receded until the patients now consider themselves cured. He mentions that the goats lost their intelligent expression and became clumsy; their hair fell out and grew in again rougher than before. The secretion of milk gradually ceased, and the general appearance of the animals after the removal of the thyroid unmistakably suggested that of myxedema in man. One goat succumbed to the progress of the symptoms in-

duced by the thyroidectomy. The therapeutic use of the milk from these animals has an undoubted effect in neutralizing the toxin elaborated by the thyroid gland in abnormal conditions, but, of course, it can not influence already established anatomic changes. The serum and milk from the thyroidectomized animals have an unmistakable influence on the heart action and must be used with caution on this account, especially when the heart is already impaired. In all other respects the serum and rodagen proved harmless, even as much as 50 gm. a day, with no other effects than the more or less rapid retrogression of the subjective and objective symptoms. Some of his patients took 5 gm. a day; others up to 30 gm. In conclusion he announces as an established fact that treatment with the milk or serum of thyroidectomized animals has a favorable influence in a large proportion of cases of exophthalmic goiter.

92. **Acromegaly.**—Huismann ascribes this affection to a lack of hypophysis functioning, the result of a primary or secondary lesion in the hypophysis. It may be due to malignant disease or hypoplasia or hyperplasia, or may result from a primary chronic affection of the blood impairing the organ secondarily. Organ treatment will certainly benefit unless irreparable changes have already been established.

93. **The "Iron Light" in Radiotherapy.**—Clasen has been favorably impressed with the action of the iron lamp, especially in acne and sycosis. Its effects are more superficial than those realized with the Finsen light, but his experience with 17 patients has shown that the new lamp, being within the reach of every practitioner, can not fail to realize great progress in the treatment of cutaneous affections. For acne in particular it is the most convenient and agreeable method of treatment yet devised. In many cases in which the acne had persisted for years the skin healed over smooth after a few applications. He had only a single failure in his 14 cases, and this one patient did not complete the course recommended. There are no subjective sensations from the application of the iron light. (It has been described in these columns, xl, page 1112, paragraph 53.)

Gazzetta degli Ospedali, Milan.

Last indexed page 891.

94 (XXIV, 86.) Contributo clinico alla chirurgia della laringe e della trachea. T. Scarrone.
95 *Cura degli angiomi senza operazione. A. Frattini.
96 (No. 89.) Contributo alla tabe spasmodica famigliare. A. Perugia.
97 *Liberation of Iodin in Contact with Animal Tissues. O. Spadoni.—Sulla liberazione dell' iodio a contatto dei tessuti animali.
98 *La digitale ad alta dose nella cura della pneumonite lobare. G. Bragagnolo.
99 (No. 92.) *Chylous and Chyliform Effusions. A. Cipollina.—Versamenti chilosi e chiliformi.
100 Sulla enteroanastomosi. A. Santucci.
101 *La cura chirurgica della nevralgia del trigemino. G. Baroni.
102 *Sull' uso di una antitossina per via gastrica. F. Figari.
103 (No. 95.) *Leucocitosi consecutiva ad iniezioni endovenose di sublimato. G. Memmi.
104 I problemi dell' innesto (*of transplantation of living tissues*). M. Segale.
105 Industrial Insurance and Tuberculous Hip Disease. E. Curto.—Infortunio sul lavoro e coxite tub.
106 Di una nuova siringa a doppia corrente. G. Baroni (Lucignano).
107 (No. 98.) La sutura ossea della frattura della rotula. T. Scarrone.
108 Unusual Manifestations of Syphilis. Secchi.—Casi non comuni di clinica sifilopatica. (Commenced in No. 89.)
109 *L' opo-terapie soprarenale nel trattamento dell' atonia vescicale. G. Moresco.

95. **Non-Operative Treatment of Angiomata.**—Frattini has invariably been able to cure cutaneous angiomata by painting them with a 6 per cent. solution of sublimate in collodion. He applies a second coat at once as soon as the first is dry, and repeats the procedure every third day. After the second or third repetition the angioma is cast off with the collodion, and nothing is left but a smooth surface, the color of the surrounding skin. In one case the angioma projected 3 cm. and was 4 cm. in diameter, but the cure was as prompt and perfect as in the other cases. No pains nor inconveniences were noted in any instance and the cures have been permanent with most satisfactory cosmetic results.

97. **Liberation of Iodin in Contact with Animal Tissues.**—Spadoni shows that iodin is liberated on contact with the tissues, but is taken up by them and is not eliminated at once. The lack of elimination must not be construed as evidence that the iodin has not been liberated.

98. **Digitalis as Specific for Pneumonia.**—Bragagnolo regards digitalis in large doses as an absolute specific for lobar pneumonia. Only 4 patients died in 54 treated in this way, and the deaths in these cases could be ascribed to other lesions. It reduces the temperature, slows the pulse and, if given early enough, will abort the disease. He follows Maragliano's technic, giving an infusion of 4 gm. of digitalis leaves by percolation with 200 gm. water, adding 100 gm. of licorice water and 2 gm. of anisated water of ammonia, the whole amount to be taken in the twenty-four hours. The benefit is apparent after four to six doses, and his experience has confirmed that of Maragliano, who says that if the pulse is not slowed in forty-eight hours by this medication the patient is doomed. The crisis occurred at the fourth day in 2; fifth day in 36; sixth day in 5; seventh day in 5; and the eighth day in 2. He resorted to venesection in a few cases toward the close of the disease, considering it of no use in the early stages.

99. **Chylous and Chyliform Effusions.**—Cipollina has always found that patients with chylous ascites did not long survive, but died in progressive cachexia. The effusion is profuse and may be accompanied by fever and signs of inflammation of the peritoneum. He describes a case of a chyliform effusion found in the pleura on the side which had been the seat of severe pleurisy thirty years before. He assumes that the effusion had remained encapsulated during this long period with granulo-fatty degeneration.

101. **Trigeminal Neuralgia.**—Baroni describes 2 cases of intractable trigeminal neuralgia cured to date by stretching the nerve at the periphery, breaking it off as high up as possible. One of his patients had had syphilis, malaria and trauma affecting the region. He believes that the percentage of cures after a simple peripheral operation of this kind is higher than that from the more serious interventions on the ganglia.

102. **Antitoxin Treatment by the Mouth.**—Figari reports extensive experiments with rabbits, dogs and asses treated with Maragliano's tuberculosis antitoxin by the mouth. In all the animals marked antitoxic, agglutinating and resisting powers were conferred on the animals by this means. The results suggest that the production of specific defensive substances is not the property of any given species, but is the expression of the general reaction of the animal organism. Persons and animals taking antitoxin by the mouth can not be regarded as immunized, but they are evidently exceptionally well guarded against tuberculosis infection by an unusual supply of Nature's protective substances.

103. **Leucocytosis Consecutive to Intravenous Sublimate Injections.**—Memmi reports a number of experiences from Patella's clinic at Siena, showing that intravenous injection of 2 to 4 mgm. of sublimate induced a moderate hyperleucocytosis, thus proving a valuable aid to the natural defenses. He has examined several patients a year after the injections and was never able to detect any disturbances nor induration of the vein. The maximum of the leucocyte reaction was obtained four to six hours after the injection; by the eighteenth to the twenty-fourth hour the leucocytes had returned to the original number.

109. **Suprarenal Treatment of Atony of the Bladder.**—Moresco was inspired by Vassale's success in the treatment of atony of the stomach with suprarenal extract, to apply it also in paralytic conditions of the bladder. He has found it equally effective in this condition, and reports that 2 patients were thus completely relieved and cured of retention from paralysis of the detrusor urinæ. He used ordinary adrenalin, which he states is much less powerful than Vassale's paraganglin, but he was unable to procure the latter at the time. He injected 150 c.c. every morning of a 1 per 50,000 adrenalin solution, leaving it in the bladder for an hour or more. After determining the tolerance of the bladder for this solution he increased the strength to 1 per 25,000. After four and six injections there were indications of spontaneous micturition,

and by the end of the second week the bladder could be spontaneously almost completely emptied, which had been impossible for a long time.

Riforma Medica, Palermo.

110 (XIX, No. 36.) *L' analgesia cocaino-adrenalinica in chirurgia generale. F. Gangitano.
111 Sopra 3 operazione per cancro dell' utero, dello stomaco e del rene. C. Callari.
112 (No. 37.) *La fisostigmina nella terapia dell' atonia intestinale. G. Curlo.
113 The Pancreas in Ordinary Cirrhosis of the Liver. L. D'Amato (Cardarelli's clinic, Naples).—Il pancreas nella cirrosi volgare del fegato.
114 *Sulla cura della eresipela facciale. F. Sarcinelli.

110. **Cocain-Adrenalin Analgesia.**—Gangitano reports from Bologna that he has used the combination of cocain and adrenalin in more than 100 operations and has never had postoperative hemorrhage nor noted any inconveniences. Among the operations were one for resection of the upper jaw; ablation of a large goiter; a Roux gastroenterostomy and a total laryngectomy. He mentions the salient points in each case, calling special attention to the advantages of the method in 2 cases of bilateral Bassini in a subject with grave heart disease, and a total hysterectomy in an obese woman with an uncompensated cardiac defect. He found that it was possible to dilate strictures of the urethra, previously impermeable, after the cocain-adrenalin application, rendering the projected operation unnecessary. He agrees with King that postoperative hemorrhage is prevented by the formation of a clot during the period of vasoconstriction. He used a mixture of 9 c.c. of a .5 per cent. solution of cocain with 1 c.c. of a 1 per 1000 solution of adrenalin hydrochlorate.

112. **Physostigmin in Intestinal Atony.**—Curlo's communication issues from Maragliano's clinic at Genoa and is based on both experimental research and 18 clinical cases. He groups the latter according to the negative or positive results obtained and thus demonstrates that the drug finds its indications in coprostasis from intestinal atony. It stimulates and induces spasmodic action and increases peristalsis. It is therefore contraindicated in spastic conditions, in intestinal catarrh and in mucomembranous enterocolitis. As it increases the tonicity of the intestinal wall it proves a valuable aid in combating meteorism. The maximal daily dose, free from symptoms of intoxication, is 4 to 6 milligrams. The standard dose is 2 or 3 milligrams. The signs of intolerance are myosis of the pupils and sialorrhea. His experience seems to show that the best mode of administration is the salicylate of physostigmin in pills.

114. **Treatment of Erysipelas.**—Sarcinelli has found that erysipelas of the face healed rapidly under application of a thin cotton face mask impregnated with .25 to .5 per 1000 solution of sublimate, substituted every two hours by another similar mask impregnated with a 3 per 1000 salicylic solution. This alternation of the masks kept the surface moist, while a too energetic action on the part of the sublimate was guarded against. If blisters formed he applied topically to them either vaselin or an ichthyol salve, before putting on the mask. This method of treatment not only benefited the local lesions but reduced the general infection, the fever rapidly subsiding, and no further medication being needed except possibly some heart tonic.

Medizinskoe Obozryenie, Moscow.

Last indexed page 818.

115 (LIX, No. 4.) *3 slutchaya bronchialnoi asthmy u dyetei (in children). E. Y. Stolkind.
116 Linear Cutaneous Affections. M. A. Tchlenoff.—K kazuistikye systematizirovannykh rodimykh pyaten, etc.
117 (No. 5.) *Syphilis and Renal Surgery. M. Margulies.—Syphilis i potchetchnaya chirurgiya.
118 House Epidemics of Syphilis. P. Jordan.—O domovykh epidemiakh syphilsa.
119 K voprosu o selesenotchnoi anemii (anemia splenica). S. M. Tzipkin.
120 *Treatment of Erysipelas with Potassium Permanganate. E. I. Martzinovski. — O lyetchenii rozhe margantzovokislym kaliem.

115. **Bronchial Asthma in Children.**—Stolkind has had occasion to observe 3 cases of typical bronchial asthma in children. In one instance it developed consecutive to a severe attack of la grippe. Eosinophile cells, Curschmann spirilla and crystals were found in the sputa. The patient was a boy of 8. The attacks occurred mostly at night and lasted for an hour and more. In the second case the asthma vanished after adenoid vegetations were removed. The third patient was a boy of 14, who had suffered from the asthma for four years. Tuberculosis was noted in other members of the family. The asthma was evidently of reflex origin in all of the cases.

117. **Syphilis and Surgery of Kidneys.**—Margulies describes a case of inflammation in and around the left kidney which was opened up on account of the severe chills and fever. The syphilitic nature of the trouble was seen at once and all symptoms vanished under specific treatment. The patient was a woman of 26.

120. **Treatment of Erysipelas with Potassium Permanganate.**—A compress moistened with a 1 per 1000 solution is applied to the erysipelatous patches. The results have been very favorable in Martzinovski's experience in 7 cases thus treated.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE NEUROLOGICAL PRACTICE OF MEDICINE. A Cursory Course of Selected Lectures in Neurology, Neuriatry, Psychology and Psychiatry. Applicable to General and Special Practice. With 177 Illustrations. After the Author's Class-Room Methods as a Teacher of Students. Designed for Students and General Practitioners of Medicine and Surgery. By Charles H. Hughes, M.D., President of the Faculty and Professor of Neurology, Psychiatry and Electrotherapy, Barnes Medical College. Cloth. Pp. 417. Price, $3.00. St. Louis: Hughes & Co.

FUNCTIONAL DIAGNOSIS OF KIDNEY DISEASE. With Especial Reference to Renal Surgery. Clinical Experimental Investigations. By Dr. Leopold Casper (Privatdocent an der Universität) and Dr. Paul Friederich Richter (Assistant der III Med. Klinik in Berlin). Translated by Dr. Robert C. Bryan, Adjunct Professor Genito-Urinary Diseases, University Medical College, Richmond, Va., and Dr. Henry L. Sanford, Resident Surgeon Lakeside Hospital, Cleveland. Cloth. Pp. 233. Price, $1.50 net. Philadelphia: P. Blakiston's Son & Co. 1903.

ELECTRO-STATIC MODES OF APPLICATION, THERAPEUTICS AND THE USES OF THE ROENTGEN RAY. By William Benham Snow, M.D., Professor of Elec[illegible] Radiotherapy in the New York School of [illegible] Second Edition, Revised and Enlarged. C[illegible] 100 Illustrations, Including Ten Full-page Half-tones, Showing the Various Methods of Posturing and Treating Conditions. Cloth. Pp. 302. Price, $3.00. New York: A. L. Chatterton & Co.

SURGERY, ITS THEORY AND PRACTICE. By William Johnson Walsham, F.R.C.S. Eng., M.B. and C.M. Aberd., Surgeon, Formerly Lecturer on Surgery and on Anatomy, St. Bartholomew's Hospital. Eighth Edition. With 622 Illustrations, Including 20 Skiagram Plates. By Walter George Spencer, M.S., M.B. Lond., F.R.C.S. Eng., Surgeon to the Westminster Hospital. Cloth. Pp. 1,227. Price, $4.50 net. Philadelphia: P. Blakiston's Son & Co. 1903.

PROCEEDINGS OF THE CONNECTICUT MEDICAL SOCIETY, 1903. One Hundred and Eleventh Annual Convention, Held at Hartford, May 27 and 28. Cloth. Pp. 465. Publication Committee: Gould A. Shelton, M.D.; Samuel B. St. John, M.D., and N. E. Wordin, M.D. Published by the Society. 1903.

ADENO-MYOME DES UTERUS. Von Thomas S. Cullen, Hülfsprofessor der Gynäkologie an der Johns Hopkins-Universität. Mit 45 Abbildungen im Text. Half Cloth. Pp. 91. Berlin: Verlag von August Hirschwald. 1903.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. Army, under orders from the Adjutant-General's Office, Washington, D. C., for the week ending Saturday, Sept. 26, 1903:

Amador, R. A., contract surgeon, will proceed, on the expiration of the leave granted him, to his home, New York City, for annulment of contract.

Darnall, Carl R., captain and asst.-surgeon, is relieved from duty in the office of the Surgeon-General of the Army, and will assume charge of the field medical supply depot in Washington, D. C., in addition to his duties in connection with the Army Medical School and as recorder of the Army medical examining board.

Fuller, Leigh A., captain and asst.-surgeon, is granted leave for fourteen days, on the expiration of which he will proceed to Fort Bayard and report at the U. S. General Hospital for duty.

Gorgas, William C., colonel and assistant surgeon-general, now on temporary duty as chief surgeon, Department of the East, will report for permanent duty as chief surgeon.

Gray, William W., major-surgeon, is detailed to represent the Medical Department of the Army at the annual meeting of the Tri-State Medical Society of Alabama, Georgia and Tennessee, to be held at Atlanta, Ga., Oct. 13 to 15, 1903.

Kulp, John S., captain and asst.-surgeon, is granted leave of absence for four months from about October 15.

Lippincott, Henry, colonel and assistant surgeon-general, by operation of law, under the provisions of the act of Congress approved June 30, 1882, is retired from active service. Colonel Lippincott will proceed to his home.

Perley, Harry O., major-surgeon, on the expiration of his present leave of absence, is directed to proceed to Fort Logan for duty.

Rich, Edwin W., first lieut. and asst.-surgeon, on his relief from duty at Honolulu, H. T., will proceed to Manila, P. I.

Torney, George H., lieutenant-colonel and deputy surgeon-general, now on sick leave at San Francisco, is relieved from further duty in the Division of the Philippines, and will assume charge of the medical supply depot at San Francisco, relieving Lieut.-Colonel Louis M. Maus, deputy surgeon-general. Lieut.-Colonel Maus will proceed to Fort Riley for duty.

Wells, George M., major-surgeon, is relieved from duty at Fort Bayard, to take effect on the arrival at that place of Captain Leigh A. Fuller, asst.-surgeon, and will then proceed to San Francisco and report for transportation to the Philippine Islands.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending Oct. 3, 1903:

Pharmacist S. W. Douglas, detached from Naval Proving Ground, *Indian Head, Md., and ordered to the Navy Yard, Portsmouth,* N. H.

Asst.-Surgeon W. S. Pugh, Jr., appointed an assistant surgeon, with the rank of lieutenant, junior grade, from Sept. 23, 1903.

Asst.-Surgeon M. V. Stone, when discharged from treatment at the Naval Hospital, New York, ordered home and granted sick leave until December 31.

Surgeon S. H. Griffith, detached from the Marine Barracks, Washington, D. C., and ordered to the *Minneapolis* and to duty as fleet surgeon of the Atlantic Training Squadron.

Asst.-Surgeon R. B. Williams, detached from the First Torpedo Flotilla and ordered to the Naval Hospital, Norfolk, Va.

Asst.-Surgeon F. M. Bogan, detached from Navy Yard, Washington, D. C., and ordered to the *Chauncey* for duty with the First Torpedo Flotilla.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospial Service for the fourteen days ended Oct. 1, 1903:

Assistant Surgeon-General George Purviance, granted leave of absence for ten days from September 21.

Assistant Surgeon-General H. D. Geddings, to proceed to Paris, France, to represent the United States at an International Sanitary Conference October 10, and, on its adjournment, to proceed to Berlin and Frankfort, Germany, and London, England, for special temporary duty.

Surgeon R. D. Murray, to proceed to New Orleans, and thence to Laredo, Texas, for special temporary duty. Reassigned to duty at Key West, Fla., effective May 15.

Surgeon Preston H. Bailhache, granted five days' leave of absence from Sept. 5, 1903, under paragraph 189 of the Regulations. To proceed to Trenton and Perth Amboy, N. J., for special temporary duty.

Surgeon D. A. Carmichael, relieved from temporary duty in the Hygienic Laboratory, and directed to rejoin his station at Vineyard Haven, Mass.

Surgeon C. T. Peckham, to proceed to Boston for special temporary duty. Bureau order of Sept. 28, 1903, directing him to proceed to Boston for special temporary duty, revoked.

Surgeon S. D. Brooks, to proceed to Savannah quarantine as inspector.

Surgeon J. H. White, granted extension of leave of absence for ten days.

Surgeon G. M. Guiteras, to proceed to Laredo, Texas, for special temporary duty.,

P. A. Surgeon M. J Rosenau, reassigned as director of the Hygienic Laboratory. effective April 27.

P. A. Surgeon C. H. Gardner, to proceed to Boston for special temporary duty.

P. A. Surgeon H. S. Cumming, to proceed to San Francisco for special temporary duty.

P. A. Surgeon H. S. Mathewson, granted leave of absence for forty-five days from September 22.

P. A. Surgeon R. H. von Ezdorf, to proceed to Laredo. Texas, and report to Surgeon G. M. Guiteras for special temporary duty.

P. A. Surgeon L. L. Lumsden, relieved from duty at Vineyard Haven, Mass.; directed to proceed to New Orleans and report to medical officer in command for duty and assignment to quarters.

P. A. Surgeon M. J. White, three days' leave of absence, granted by Bureau telegram of August 23, revoked.

Asst.-Surgeon W. C. Hobdy, granted leave of absence for seven days from Aug. 22, 1903, under paragraph 191 of the Regulations.

Asst.-Surgeon C. W. Vogel, granted leave of absence for two days from Sept. 17, 1903, under paragraph 191 of the Regulations.

Asst.-Surgeon R. E. Ebersole, to proceed to New Orleans and report to medical officer in command. To proceed to Houston, Texas, for special temporary duty.

Asst.-Surgeon E. M. Steger, to proceed to New York and report to Surgeon G. W. Stoner, Immigration Depot, for duty.

A. A. Surgeon G. H. Altree, granted leave of absence for eighteen days on account of sickness.

A. A. Surgeon Hugh Burford, granted leave of absence for thirty days from September 20.

A. A. Surgeon D. M. Echemendia, granted extension of leave of absence, on account of sickness, for seven days from September 3.

A. A. Surgeon E. E. Hallett, granted leave of absence for three days from September 26.

A. A. Surgeon W. A. Weldon, granted leave of absence for seven days from Aug. 31, 1903, under paragraph 191 of the Regulations.

Pharmacist J. Achenbach, granted seven days' leave of absence from September 9, 1903, under paragraph 210 of the Regulations.

Pharmacist F. S. Goodman, granted twenty-three days' leave of absence from September 10. To proceed to Washington, D. C., for special temporary duty.

Pharmacist F. R. Hanrath, granted leave of absence for twenty-one days from September 7.

Pharmacist S. W. Richardson, granted ten days' leave of absence from September 20.

Pharmacist C. H. Woods, to proceed to St. Louis, and report to medical officer in command for temporary duty.

Pharmacist M. Walerius, to proceed to Laredo, Texas, and report to Surgeon G. M. Guiteras for special temporary duty.

Pharmacist E. B. Scott, granted leave of absence for thirty days from September 5.

Pharmacist J. E. Beck, granted leave of absence for thirty days from September 14.

Pharmacist F. A. Southard, granted leave of absence for three days from Sept. 28, 1903, under paragraph 210 of the Regulations.

Pharmacist G. A. Morris, granted leave of absence for twenty days from September 14.

Pharmacist C. Stier, to proceed to Key West, Fla., and report to acting assistant surgeon in temporary charge for duty.

APPOINTMENT.

Edward M. Steger, of Texas, commissioned as assistant surgeon (recess) in the Public Health and Marine-Hospital Service, Sept. 4, 1903.

BOARDS CONVENED.

Board convened at Washington, D. C., Sept. 25, 1903, for the purpose of making physical examinations of candidates for appointment in the Revenue-Cutter Service. Detail for the board: Assistant Surgeon-General W. J. Pettus, chairman; Asst.-Surgeon A. J. McLaughlin, recorder.

Board convened at the Purveying Depot, New York, Oct. 5, 1903, for the physical examination of officers of the Revenue-Cutter Service. Detail for the board: Surgeon H. W. Sawtelle, chairman; P. A. Surgeon A. C. Smith, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Oct. 3, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, Sept. 19-26, 4 cases.

California: Los Angeles, Sept. 12-19, 2 cases.

Illinois: Belleville, Sept. 19-26, 3 cases; Chicago, Sept. 19-26, 2 cases; Danville, Sept. 19-26, 1 case.

Maine: Oldtown, Sept. 19-26, 8 cases.

Maryland: Baltimore, Sept. 19-26, 1 case.

Massachusetts: Fall River, Sept. 19-26, 2 cases.

Michigan: Detroit, Sept. 19-26, 1 case; Port Huron, Sept. 19-26, 3 cases.

Minnesota: Crow Wing county, Sept. 14-21, 23 cases; Stearns county, Sept. 14-21, 3 cases; Stevens county, Sept. 14-21, 1 case.

Mississippi: Natchez, Sept. 13-20, 1 case.

New York: Niagara Falls, Sept. 19-26, 2 cases.

Ohio: Cincinnati, Sept. 18-25, 1 case; Cleveland, Sept. 19-26, 1 case.

Pennsylvania: Altoona, Sept. 19-26, 1 case; Butler, Sept. 12-19, 1 case.

South Carolina: Charleston, Sept. 19-26, 2 cases.

Tennessee: Memphis, Sept. 19-26, 3 cases.

Wisconsin: Milwaukee, Sept. 19-26, 2 cases.

SMALLPOX—INSULAR.

Philippines: Manila, Aug. 1-15, 1 case, 1 death.

SMALLPOX—FOREIGN.

Austria: Prague, Sept. 5-12, 1 case.

Belgium: Brussels, Sept. 5-12, 1 death.

Brazil: Pernambuco, Aug. 1-15, 9 deaths; Rio de Janeiro, Aug. 23-30, 46 cases, 20 deaths.

China: Shanghai, Aug. 8-15, 2 deaths.

Colombia: Barranquilla, Sept. 6-13, 1 death.

Great Britain: Bradford, May 30-Sept. 12, 155 cases, 9 deaths; Dundee, Sept. 5-12, 3 cases; London, Sept. 5-12, 9 cases; Newcastle-on-Tyne, Sept. 5-12, 5 cases; South Shields, Sept. 5-12, 1 case.

India: Bombay, Aug. 24-Sept. 1, 3 deaths.

Netherlands: *Amsterdam*, Sept. 12-19, 5 cases.

Russia: Moscow, Aug. 29-Sept. 5, 1 case, 1 death; Odessa, Aug. 29-Sept. 5, 5 cases; Warsaw, Aug. 22-29, 1 death.

Turkey: Smyrna, Aug. 31-Sept. 6, 40 deaths.

YELLOW FEVER—UNITED STATES.

Texas: Laredo, Sept. 24-28, 13 cases, 3 deaths.

YELLOW FEVER—FOREIGN.

Colombia: Panama, Sept. 14-21, 2 cases, 1 death.

Mexico: Vera Cruz, Sept. 12-19, 35 cases, 10 deaths.

Venezuela: Cagua, Sept. 19, epidemic; San Felipe, Sept. 19, epidemic.

CHOLERA—INSULAR.

Philippines: Manila, Aug. 1-15, 32 cases, 24 deaths; *provinces*, Aug. 1-15, 1,991 cases, 1,492 deaths.

CHOLERA—FOREIGN.

China: Shanghai, Aug. 8-15, 2 deaths.

India: Calcutta, Aug. 15-29, 18 deaths; Madras, Aug. 15-22, 1 death.

PLAGUE—FOREIGN.

Africa: Cape Colony, July 26-Aug. 8, 1 case.

Brazil: Rio de Janeiro, Aug. 23-30, 19 cases, 10 deaths.

China: Hongkong, Aug. 8-15, 13 cases, 11 deaths.

Egypt: Alexandria, Aug. 22-28, 7 cases, 6 deaths; Damiette, Aug. 22-28, 7 cases, 5 deaths.

India: Bombay, Aug. 24-Sept. 1, 79 deaths; Calcutta, Aug. 21, 29 deaths.

New Caledonia: Aug. 29, 23 cases, 17 deaths.

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Original Articles.

CONSERVATIVE PERINEAL PROSTATECTOMY.

A PRESENTATION OF NEW INSTRUMENTS AND TECHNIC.*

HUGH H. YOUNG, M.D.
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BALTIMORE.

The literature of the prostate and its operative treatment has become so vast that I will not attempt to discuss the many valuable articles which bear on this subject, but will simply present a résumé of my own work and the problems which have presented themselves.

My first prostatectomy[1] was in 1898, a patient on whom a suprapubic opening had been made for drainage. At this operation a tremendous intravesical outgrowth of the middle lobe was found, and as there was very little enlargement of the lateral lobes, I enucleated the mass through the suprapubic wound, with the assistance of a finger in the rectum (Fig. 1), a method which has also been employed by Guiteras, and described[2] by him in 1900.

The next three cases presented no median enlargements, the hypertrophy being confined to the lateral lobes. Following the advice of Alexander, I used the combined method, removing the lobes through the perineal wound with the assistance of a suprapubic incision. Although the operation was tedious and extensive, these patients did well, and in a paper on the subject I said that Alexander's was the operation of choice, except for middle lobe cases.

My next four cases were characterized by considerable middle lobe enlargements, and I therefore used the suprapubic route, and was surprised to find that with the assistance of the finger in the rectum I could easily enucleate very large lateral lobes in one piece with the median without destroying the urethra. The operation was also very much quicker—it frequently being possible to complete the enucleation in 5 to 6 minutes, whereas the combined operation would frequently take nearly an hour.

The principal objection to the perineal route was the necessity of the suprapubic incision to push the prostate down into the perineum where it could be enucleated, and I then thought of having an instrument made with two blades, which could be inserted closed through a perineal urethrotomy, separated when in the bladder, and then used as a tractor to drag the prostate toward the perineum. This was in 1899, but I never had the instrument constructed, but continued to do all prostatectomies suprapubically. The results obtained were excellent, the greatest objection being the considerable hemorrhage following the operation, the great duration of the convalescence, and the occasional development of suprapubic hernia afterward.

In 1899 several patients came to me who were so old and so weak that I was afraid to even administer a general anesthetic, much less to do so severe an operation as a suprapubic prostatectomy. One patient, being unable to use a catheter, caused me to purchase a Bottini incisor, and the results which I obtained on extremely old and feeble men, under local cocain anesthesia, were indeed so marvelous that I adopted the Bottini operation as the method of choice in cases past 65 years of age, who were not in a prime surgical condition.[3] Using my instrument with interchangeable blades of different size[4] I was able to operate safely and radically on prostates of any size. I found it possible also to successfully attack large middle lobes by making an oblique incision with the cautery blade on each side of the pedicle, thus dropping it back out of the way,[5] where it would afterward atrophy. In two years I operated thus on 40 cases, with two deaths, only one of which was due to the operation. Of these 15 were over 70 and three over 80, with no deaths, and with cures in all these cases but one.

I feel sure that many of these patients would have succumbed had a suprapubic or a combined prostatectomy under general anesthesia been done with the subsequent prolonged recumbent posture. The use of cocain, the little shock and hemorrhage produced by the Bottini, and the rapidity of the convalescence—out of bed on the second or third day—were the factors which contributed to save them. Since then I have used the cautery incisions on many more cases, some just as old and as desperate as those described above, with similar gratifying results. But while I have demonstrated to my own satisfaction that the Bottini operation is the only safe and justifiable radical procedure in very feeble subjects, I have never ceased to make use of prostatectomy when fit subjects presented themselves.

The publications of Syms, Murphy, Ferguson, Bryson and others within the past two years caused me to turn my attention again to the perineal route. In studying the methods that have been proposed, the intravesical balloon, which Syms used to draw the prostate into the perineal wound, seemed to me to be much better suited to overcome the great objection to perineal prostatectomy, the depth of the wound with the consequent difficulty of reaching the lobes to enucleate them, than Murphy's hooks, Ferguson's capsular retractors or Bryson's suprapubic prevesical incision.

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* Read before the American Association of Genito-urinary Surgeons, Washington, D. C., June 12, 1903.

[1] Report in a paper before the Medical and Chirurgical Faculty of Maryland, September, 1898.

[2] Guiteras: New York Medical Journal, Dec. 8, 1900.

[3] Young: Trans. Southern Surg. and Gynecol. Assn., 1901.

[4] THE JOURNAL A. M. A., Jan. 11, 1902.

[5] Monatsberichte für Urologie, January, 1901.

The rubber balloon did not, however, appear to me to be quite perfect in that it did not seem to furnish sufficient strength for the great traction which is necessary, and the fact that Syms[6] had acknowledged that he found a metal instrument devised by Gouley, which was passed like a sound into the bladder, of great assistance in pushing down the prostate, confirmed me in my opinion that while the idea of making traction by means of an instrument which could be introduced into the bladder through a perineal urethrotomy wound was correct, the method adopted by Syms—the rubber balloon and tube—could be improved on.

I therefore set to work to construct an instrument of metal for this purpose. After several months of experiment, during which I endeavored to discover and correct the faults of each model by operative use, the instrument was completed, as shown in Illustrations 2, 3 and 4. It consists of two fenestrated blades attached to shafts, one of which revolves around the other. When the two handles near the outer end which regulate the rotation are brought together the blades are approximated and in position for insertion into the bladder through the opening in the membranous urethra (Fig. 2). Once introduced above the intravesical limits of the prostatic lobes the blades may be separated by rotating blades away from each other (Fig. 3), when it is ready for whatever traction on its shaft may be necessary to draw the prostate well into the perineal wound. Before discussing the use of this instrument, however, I wish to discuss some problems of technic and conservatism which have been met.

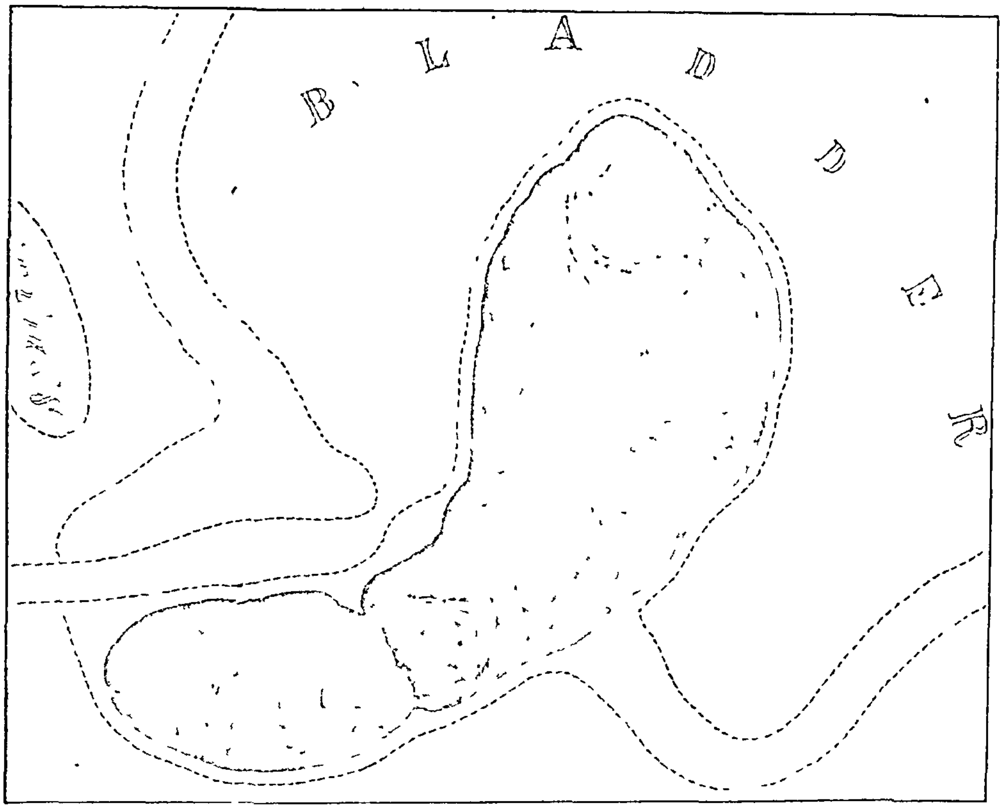

Fig. 1.—A large intravesical median lobe removed by suprapubic route. Actual size.

The Ejaculatory Ducts.—The fact that many of the cases requiring prostatectomy are vigorous men in the fifties, with sexual powers well preserved, renders it important to do nothing to injure their manly vigor.

In a recent report, Petit[7] furnishes the results of a careful study of Albarran's cases of perineal prostatectomy. He was able to follow 6 cases who had had normal sexual powers before the operation. Of these 2, both under 60 years of age, have never been able to have erections since the operation. In 2 cases the erections are much enfeebled; 2 cases are as strong sexually as before operation.

The operation is performed by Albarran without respect to the ejaculatory ducts, the prostatic urethra being opened wide in the median line, and the lobes enucleated through this incision. It would seem that the ejaculatory ducts are almost certain to be injured or removed in this procedure.

Petit mentions the work of other operators and concludes: "It seems to be shown that perineal prostatectomy diminishes if it does not suppress erections in some cases. But it is a curious fact that some cases operated on can still ejaculate." Another evidence of injury done to the ejaculatory ducts is that Petit reports that 12 cases in 30 suffered with epididymitis after the operation.

I know of no other statistics on these points. The three cases on whom I performed perineal prostatectomy by Alexander's method five years ago I have been unable to follow, and the twelve perineal prostatectomies which I have done in the past five months are too recent to draw final deductions from. Although the question needs further study, it is nevertheless evident that due attention should be paid, in performing the operation, to the importance of the prostate as a sexual organ.

In order to determine the relation of the ejaculatory ducts to the urethra and the prostatic lobes, I have made transverse and longitudinal sections in the specimens both of normal and of hypertrophied prostate.

The accompanying illustrations show very graphically the course of the ejaculatory ducts in the normal state (Figs. 5 and 6). As seen here, if we trace them backward from their urethral orifices we find that they rapidly approach the posterior capsule of the prostate; that the tissue separating them from the urethra gradually increases, and that the point of junction of the seminal vesicle and vas is reached considerably in front of the junction of the prostate with the bladder. Stained sections of the posterior portion show a considerable agglomeration of the glandular tissue surrounded by encircling muscular and connective tissue fibers which separate it more or less markedly from the glandular tissue of the adjoining lateral lobes. This mass of glands has been called by Albarran[8] the prespermatic group, and this it is which is most concerned in the production of median lobe enlargements. If this mass of glands (Fig. 5, A) is only slightly hypertrophied a median bar may be produced, which may be continuous with the lateral enlargements on each side, the whole forming a collar around the prostatic orifice. If, however, this group takes on considerable hypertrophy a sessile or lated intravesical median lobe, sometimes of nensions, results. In these latter varieties an-oup of glands which lie just beneath the mu-ere the trigone joins the urethra, and which Al-has called the subcervical group, may take part hypertrophy. All these median enlargements ipward, away from the ejaculatory ducts, from they are separated by considerable tissue, includ-eir encapsulating fibers.

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[6] Syms: Annals of Surg., April, 1902.

[7] Petit: De la Prostatectomie Perineal, Paris, 1902.

[8] Albarran and Motz: Annales d. Mal. d. Organes Genito-Ur., July, 1902.

the hypertrophied prostate the position of the latory ducts and vesicles depends considerably on haracter, size and disposition of the enlargements. ie hypertrophy is great, and especially if a consid-le median lobe is present, the vesical neck is gen-ly found elevated far above the level of the ducts vesicles, as shown in Figure 7, which is a longi-inal section of a prostate in which the lateral and dian lobes are all three greatly hypertrophied. The cts enter so low down on the posterior surface of the ostate that the median lobe is not in relation to them at all, and is separated from the vesicles by the prostatic capsule. It would, therefore, be easy to enucleate this lobe without injuring the ducts at all if properly done. Note here also the great width of the urethra, the proximity of its floor and the sharp bend which it makes in front of the middle lobe. Cross section A (Fig. 8) is taken where the utricle and one duct enter the urethra; B is taken a little farther back and shows the ducts midway between the posterior capsule and the urethra. Note the inverted Y urethra produced by the verumontanum below and the pressure of the lateral lobes against each other in front, and the slit-like character of the urethra. In C the ducts lie very close to the capsule.

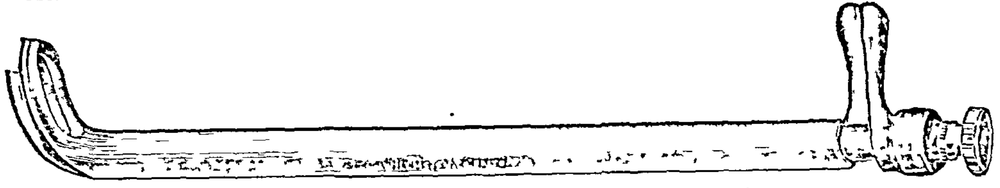

Fig 2.—Prostatic tractor closed and ready for introduction

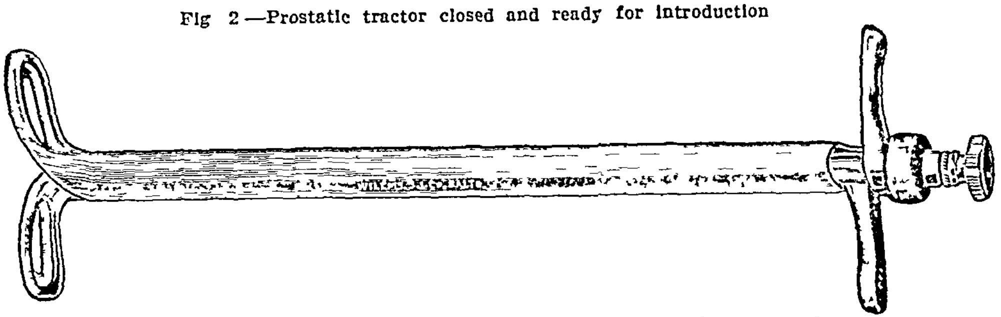

Fig 3.—Prostatic tractor opened out as after introduction into bladder.

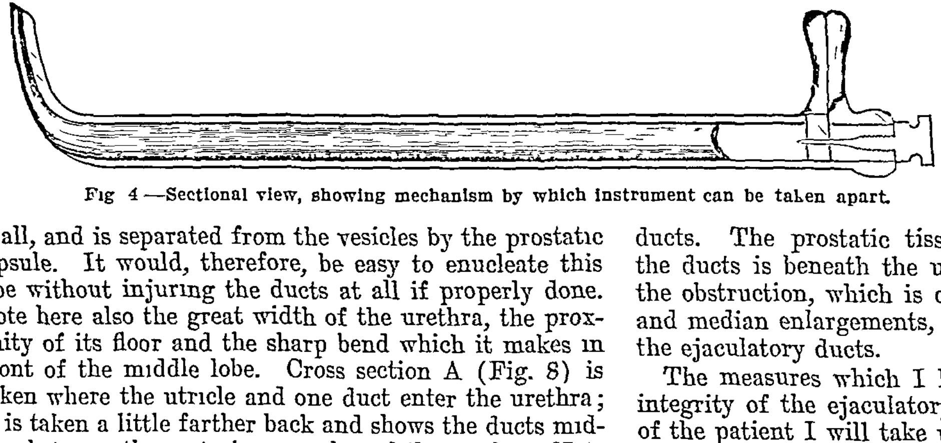

Fig 4.—Sectional view, showing mechanism by which instrument can be taken apart.

Section D, which has been taken through about the middle of the prostatic mass, shows the junction of the vesicle and vas just outside the prostatic capsule. Note the greater distance of the urethral floor from the capsule. This is shown in still greater amount in C, and the vesicles and ampullæ are here seen to be separated from the median mass by the prostatic capsule. In F, which is taken about 5 mm. in front of the vesical orifice of the prostate, the further elevation of the median lobe is shown. The full extent of the median lobe is shown in the median section (Fig. 7).

Figure 9 is a side view of another specimen in which the vesicles and vasa join the prostate low down on the posterior surface.

In cases of little or no median lobe enlargement the hypertrophied lateral lobes seem also to carry the vesical neck upward and leave the vesicles and vasa behind, so that they are often found entering the capsule well down on its posterior surface, as depicted in Figure 9, the side view of a specimen of considerable hypertrophy of the right lateral lobe. The aponeurosis of Denonvilliers, which is firmly attached to the posterior surface of the seminal vesicles and of the prostate below their entrance, and which binds the two together closely, may be responsible for the upward growth of the hypertrophied prostate and the resultant low insertion of the ducts into the posterior surface.

The results of this study of the course of the ejaculatory ducts may be thus summarized:

In the normal prostate the ejaculatory ducts lie for the most part just beneath the posterior capsule, considerably below the level of the vesical neck, and are separated from it by the prespermatic group of glands.

In the hypertrophied prostate the same statements are true, the only difference being that the ducts enter relatively lower down, and the vesical neck is separated from them by much more tissue, especially if the prespermatic group of glands have taken on growth with the resulting median lobe enlargement, when the vesical orifice is lifted high up above the level of the ducts. The prostatic tissue immediately adjacent to the ducts is beneath the urethra and plays no part in the obstruction, which is caused entirely by the lateral and median enlargements, both of which are well above the ejaculatory ducts.

The measures which I have adopted to preserve the integrity of the ejaculatory ducts and sexual puissance of the patient I will take up a little later.

TECHNIC OF THE OPERATION.

Position of the Patient.—The exaggerated dorsal lithotomy position is the most satisfactory. The perineal board of the Halsted table is admirably suited for this purpose. The perineum should be so elevated that it is almost parallel with the floor. Before placing the patient on the table a grooved sound, to be used as a guide for subsequent urethrotomy, should be placed in the urethra, as it is difficult to introduce it after the thighs have been flexed.

Cutaneous Incision.—If the patient is thin, and the prostate apparently close to the perineum I use a median perineal incision. This need not be more than 6 cm. long, the posterior limit being near the anus. The dissection is carried through the fat and superficial fascia when the wound is enlarged by lateral traction and the central tendon of the perineum, connecting with the bulb in front and the levator ani muscles behind, exposed. If the patient is a large man with thick perineal muscles, and the prostate is found, on rectal examination, to be situated deep, or the perirectal fat is abundant, I generally use an inverted V-shaped incision, as shown in Figure 10. The apex of this incision is taken just over the posterior part of the bulb, and the two branches are each 5 cm. long, the posterior limits being about midway between the anus and ischial tuberosities.

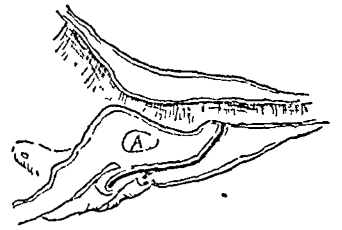

Fig. 5.—Longitudinal section of normal prostate. A, Prespermatic group of glands.

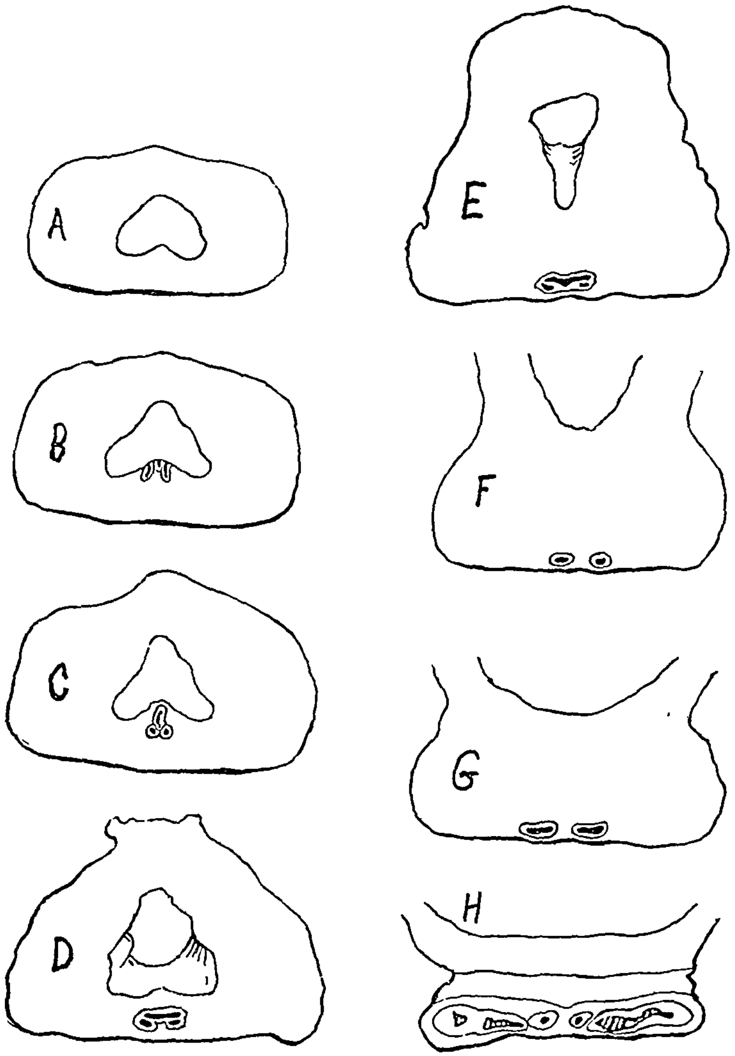

Fig. 6.—Cross section of normal prostate. A, At a point just in front of opening of ducts and utricle; B, at opening of utricle and ducts; C and D, 5-10 mm. back; E, at entrance into bladder; G, at the junction of seminal vesicles and ampullæ; H, the seminal vesicles and ampullæ separated.

I used to employ the inverted Y-shaped incision, but I have found the median portion along the bulbous urethra entirely unnecessary, as the field of operation is far behind that region. Zuckerkandl's crescentic incision gives, I think, an unnecessarily large wound.

The strenuous objections which have been urged by some to any other than a median incision, I think only apply when the lateral incisions are carried through the muscle. This I never do, and the inverted V incision gives me much more room, and allows the rectum to be retracted backward so much better that I think it is often preferable to a median perineal incision.

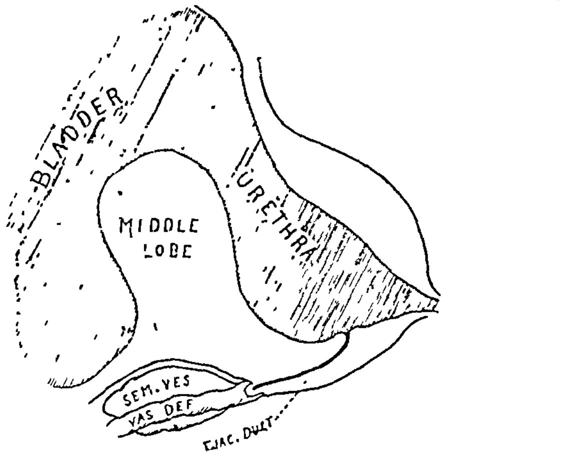

Fig. 7.—Longitudinal section of a prostate, with great hypertrophy of the median and lateral lobes. Urethra very wide and thin. Note low insection of ducts.

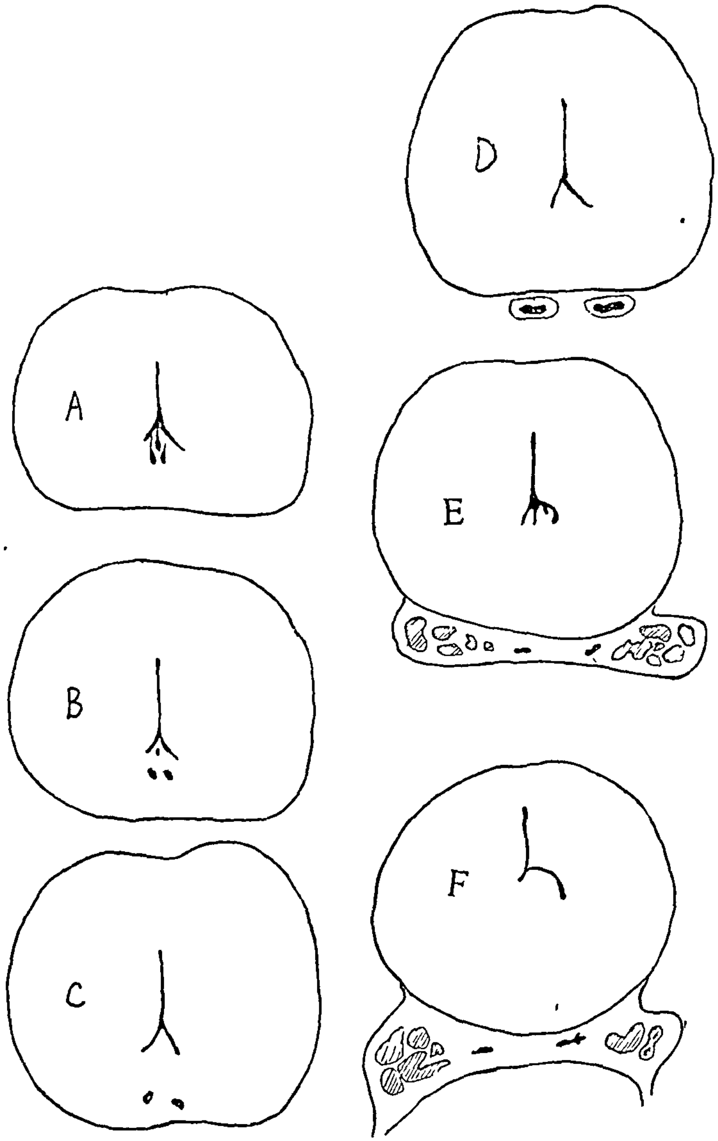

Fig. 8.—Six cross sections of the same prostate at different levels, as in Figure 6. The ducts rapidly approach the posterior capsule and in D are already outside of it. A shows the beginning of the median lobe, and F just before the entrance of the urethra into the bladder.

Exposure of the Membranous Urethra.—After the superficial muscles have been exposed by blunt dissection, as shown in Figure 11, the central tendon is caught by a clamp near the bulb and divided. This at once frees the sphincter and the levator ani from their anterior attachment, and exposes the rectum drawn forward by the recto-urethralis muscle, as seen in Figure 12. The recto-urethralis is a short muscle with rather indefinite margins, which, as its name indicates, joins the rectum with the urethra. It is apparently responsible for the acute anterior flexure of the rectum which lies so close to the apex of the prostate and membranous urethra and which one finds in rectal examinations. In order to reach the membranous urethra and the apex of the prostate, it is necessary to divide this muscle, as shown in Figure 13. This at once exposes the *"espace decollable retroprostatique"* which has been so well described by Proust,[9] who has shown that unless this muscle is divided the operator is apt to tear into the rectum, which is drawn forward by it. Division of this muscle allows the rectum to drop back, and leads at once into the space surrounding the posterior surface of the prostate.

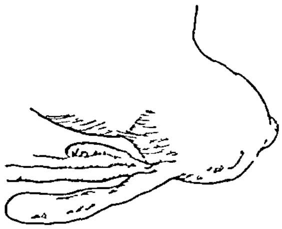
Figure 9.

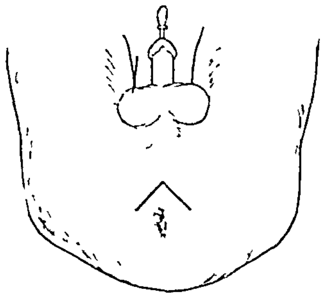
Figure 10

Fig. 9.—Side view of hypertrophied prostate, showing low *entrance of ducts on posterior surface.*

Fig. 10.—The inverted V cutaneous incision.

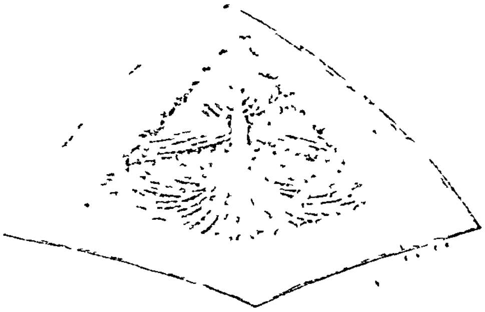
Fig. 11.—Exposure of bulb, central tendon and levatores ani.

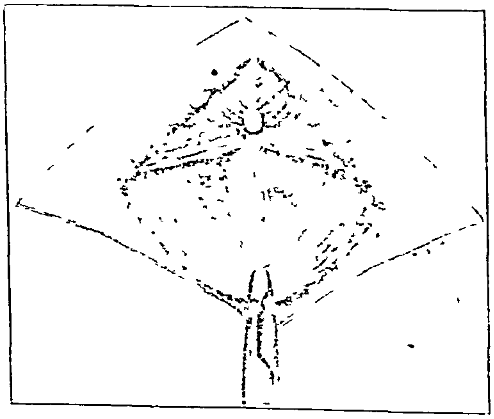
Fig. 12.—After division of central tendon. Exposure of recto urethralis muscle.

Urethrotomy and Insertion of Tractor.—After the membranous urethra has been exposed by division of the recto-urethralis muscle a retractor is inserted and the apex of the prostate brought into view, as shown in Figure 14. The membranous urethra is then opened on the sound, which was inserted in the urethra before the patient was put in the lithotomy position, and the edges of the urethral wound caught up by silk sutures or by Kocher clamps. A sound of moderate size is then passed through the incision into the prostatic urethra and bladder, and the sphincters dilated by a to-and-fro motion of this instrument.

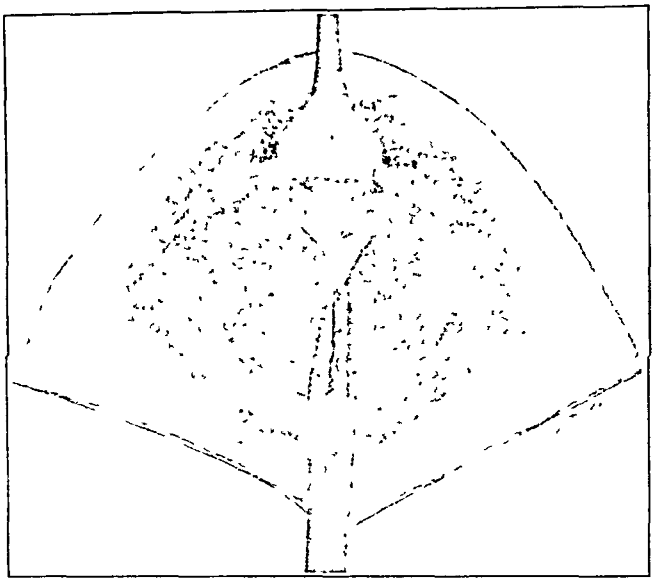
Fig. 13.—After division of recto urethralis, exposure of membranous urethra.

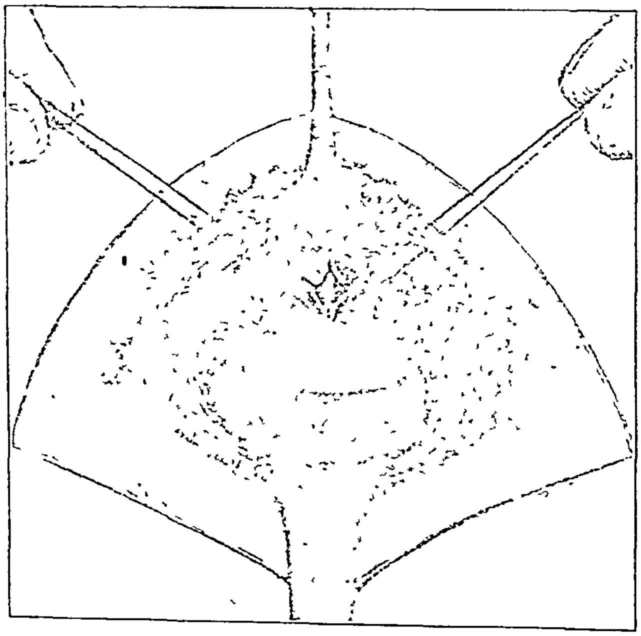
Fig. 14.—Opening of urethra on sound, preparatory to introduction of tractor.

The *prostatic tractor, closed (Fig. 2)*, is then passed into the bladder, the edges of the urethral wound being held open by the silk sutures to facilitate its introduction. As a matter of fact, I have never experienced any difficulty in introducing the instrument, the caliber of which is only about No. 30 F.

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[9] Proust: Technique de l'incision prerectale, appliquée a la Chirurgie genitale chez l'homme, Paris. Thesis, 1902. Centralbl. Harn. u. Sex. Org., 1903.

As soon as the beak is free in the vesical cavity the thumb screw which fixes the blades in position is loosened, the blades rotated 180 degrees by means of the external blades, and then fixed by tightening the thumb screw.

The instrument is now ready for whatever traction may be necessary to draw the prostate well down into the perineal wound, as shown in Figure 15. Figure 16 shows the position of the blades in the interior of the bladder, each blade projecting laterally so as to engage the intravesical surface of the lateral lobe.

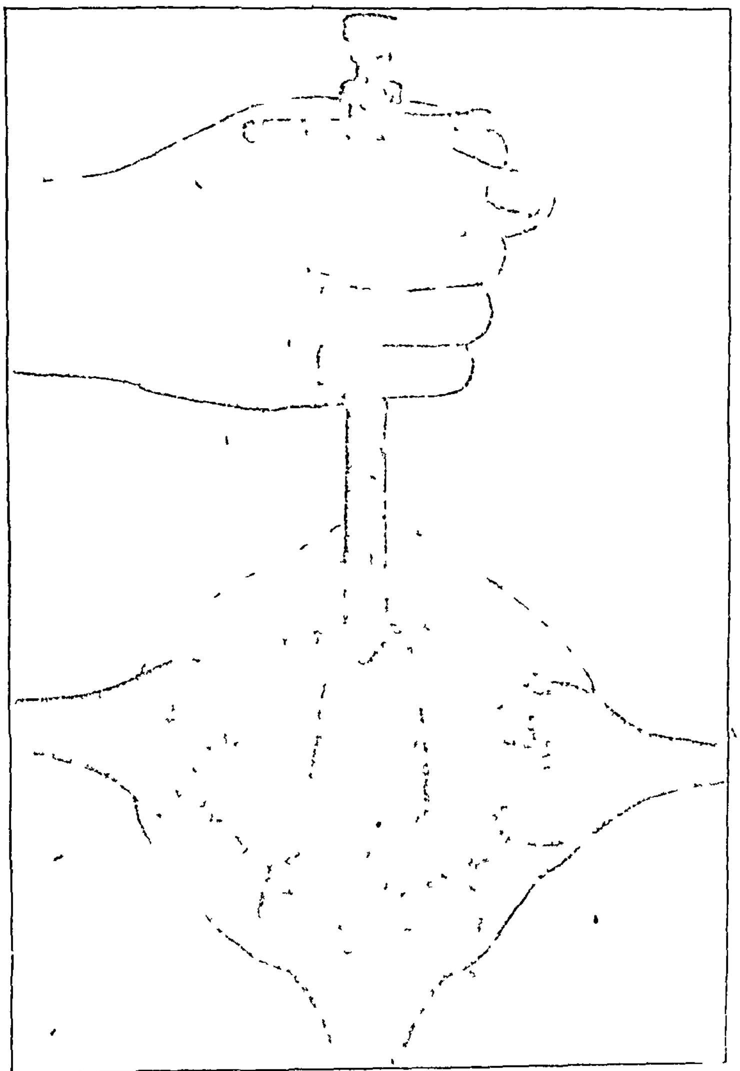

Fig 15.—Tractor introduced; blades separated; traction made, exposing posterior surface of prostate. Incisions in capsule on each side of ejaculatory ducts.

Exposure of Prostate and Incision of Capsule.—Lateral retractors are so placed that with the posterior retractor drawing the rectum backward, and the prostatic tractor drawing the gland outward, a splendid exposure of the entire posterior surface of the prostate is obtained. These retractors should not be too deep. An incision is then made on each side of the median line for almost the entire length of the posterior surface of the prostate and about 1 cm. deep. The two lines are convergent, as shown in Figure 15, being about 1.8 cm. behind and 1.5 cm. apart in front. The bridge of tissue which lies between them contains the ejaculatory ducts, and its preservation is of utmost importance, if the integrity of these structures is to be left uninjured. It is for this purpose that I make the initial capsular incision 1 cm. deep on each side, as these define at once, and correctly, the width of the "ejaculatory bridge," and prevent its being torn, as might happen if we depend on blunt dissection. Another advantage is that these incisions bring us at once to the side of the urethra where the internal enucleation (urethra from inner surface of lobe) can be easily accomplished later on.[10]

Enucleation of Lateral Lobes.—We are now ready to begin the external enucleation, the separation of the capsule from the lateral lobes, which is best done with the blunt dissector, as shown in Figure 17. Capsules are of varying thickness, and contain several layers of cleavage. It is important to start the separation in the right layer, not too deep as you may be led into the substance of the lobe, and not so superficially as to be outside of most of the capsule. After the stripping up process has been started correctly it is easily continued by blunt dissectors until first the lateral and then the

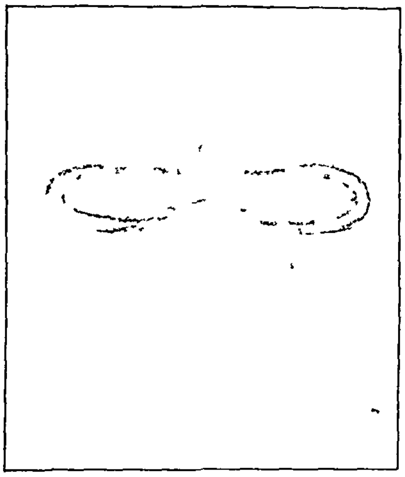

Fig 16.—Showing position of blades in interior of bladder in case of median and bilateral hypertrophy.

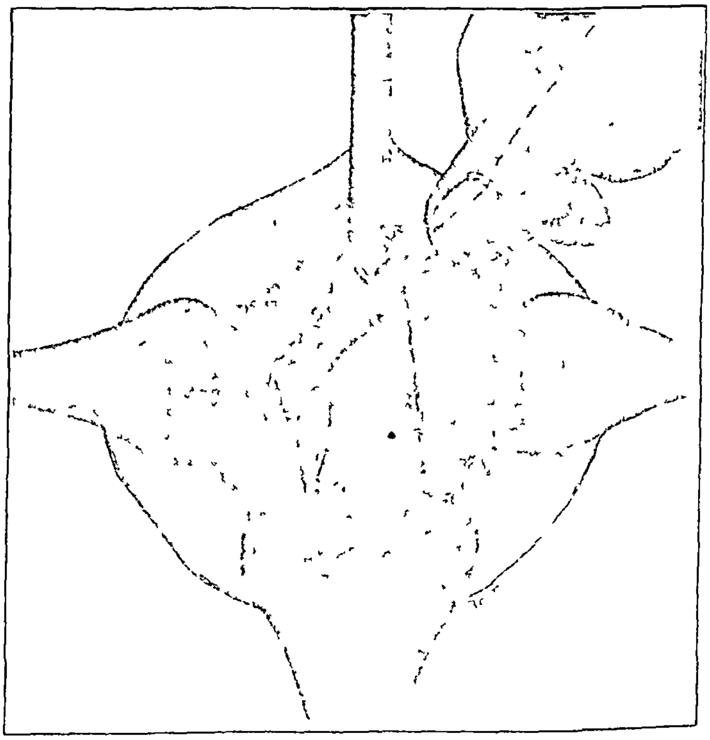

Fig 17.—External enucleation begun

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[10] Various capsular incisions have been proposed, e g., Alexander used a transverse incision, Ferguson an elliptical, Albarran, Bryson and others a median, etc Murphy advised parallel longitudinal incisions similar to those I use, but with the idea of avoiding the vessels in the median line and not, I believe, from any desire to save the ejaculatory ducts, for he afterward deliberately cut away the bridge which contains them, with the idea of preventing muco cutaneous fistulæ · Discussion on prostatectomy, American Medical Association, Saratoga, 1902, The Journal A M A, Oct 25, 1902

anterior surface of the lateral lobes have been freed from the capsule. When the deeper portion is reached I use a special long curved blunt dissector.

The internal enucleation should be taken up after the external, as it is a much more delicate procedure and often requires considerable care to prevent tearing into the urethra. As remarked above, the primary incision is made with the scalpel until the level of the urethra is reached, after which the blunt dissector is used. During this procedure the shaft of the prostatic tractor is grasped firmly in the operator's left hand (Figs 15, 17 *et seq.*) and serves not only to draw the prostate so well down into the skin wound that every procedure is done in plain view, but to steady the prostate and mark out the course of the urethra so that it can be avoided.

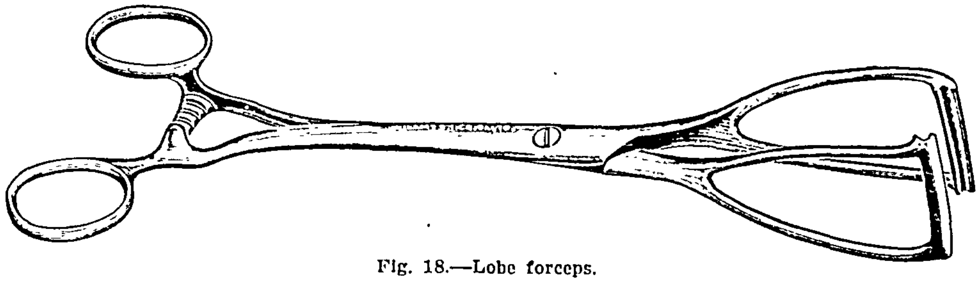
Fig. 18.—Lobe forceps.

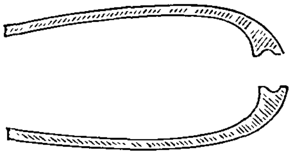
Fig. 19.—Sectional view of blades.

When the enucleation of a lateral lobe has progressed fairly well on each side, it is advantageous to have traction made on the lobe itself in order to facilitate the separation of the deeper portion. I tried various instruments—vulsellum forceps, pedicle forceps and hook retractors—for this purpose, but I found that all toothed instruments quickly tore through the friable tissue whenever traction sufficient to be of any assistance in drawing out the lobe was used. It, therefore, seemed advisable to have fenestrated forceps which could grasp the entire lobe, and present such broad surfaces to it that no cutting or tearing of the capsule would be done. I accordingly designed the instrument shown in Figure 18. As seen in Figure 20, the two blades grasped the prostate with broad surfaces, so shaped as to hold, but not to cut, the lobe when the pressure is applied (Fig. 19). These forceps I have now used in four cases, and have found them of great assistance.[*] The lobes have come out in one piece, and I have been able to apply very great traction without tearing them, thus greatly facilitating the deeper enucleation (see Fig. 20). Nearly all of the enucleation is done with the blunt dissector, but when the intravesical portion of the lateral lobe is reached I generally use the finger so as to avoid tearing through the thin mucous membrane covering it. The intravesical blade of the prostatic tractor, which can be distinctly palpated through the mucous membrane by the enucleating finger, serves to direct the separation of the deeper portion, and warns against tearing into the bladder. It also shows when some of the lobe has been left behind. The conditions present after the enucleating of the two lateral lobes, as described above, are shown in Figure 21. As shown in this schematic cross section, the urethra, which contains the tractor, is left intact. Beneath is the bridge of tissue surrounding the ejaculatory ducts. The empty capsule is shown on each side.

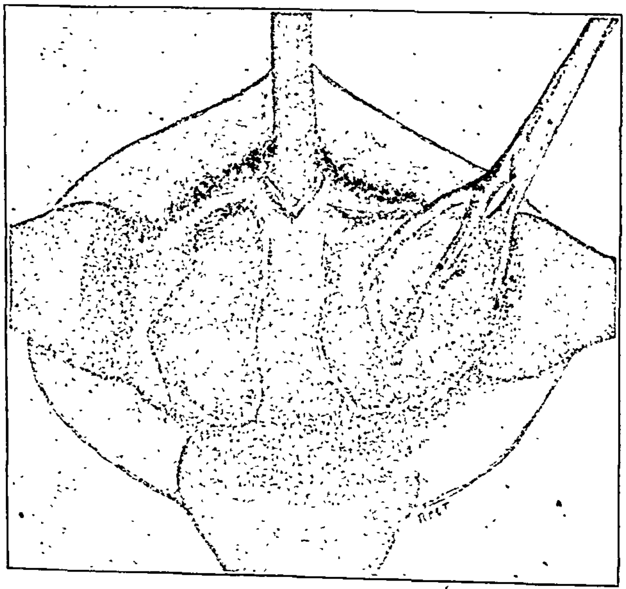
Fig. 20.—Enucleation of lobes. Forceps in position.

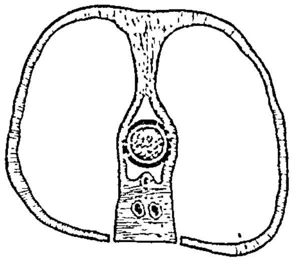
Figure 21.

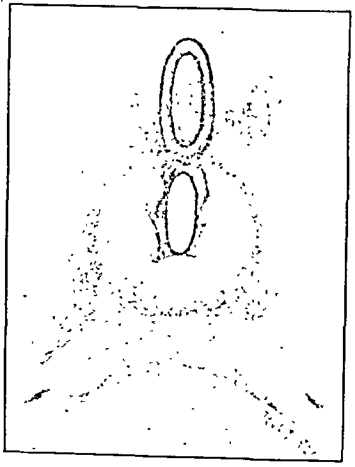
Figure 22.

Fig. 21.—Schematic cross section after enucleation of lateral lobes, showing ducts and median bridge of tissue. Instrument in urethra.

Fig. 22.—The blade rotated so as to engage middle lobe.

Enucleation of the Middle Lobe.—After the lateral lobes have been shelled out, attention should be directed to the median portion of the prostate. If the previous cystoscopic examination has demonstrated a thin transverse bar, it would often be found that removal of the lateral lobes has allowed it to collapse, showing that it was really an artefact, a fold of mucous membrane hooked up by the lateral outgrowths, and not containing any hypertrophied tissue.

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[*] I have since used them in many more cases, and found it desirable to have a smaller size made for small lobes.

On the other hand, there is most often a more or less extensive hypertrophy of the prespermatic group of glands, and the mass can be easily seen, or felt by the finger in one of the intracapsular cavities (Fig. 23). Further examination will generally reveal a fair amount of tissue between the median lobe and the region of the ejaculatory ducts, which, as I have previously pointed out, lie well forward on the posterior surface, and close to the capsule. The median enlargement is generally more or less definitely attached to one or both of the lateral lobes and is oftentimes already so loosened from its encapsulations that there is no difficulty in shelling it out through one of the lateral cavities—without disturbing the integrity of the ejaculatory ducts and prostatic tissue immediately surrounding them.

The prostatic tractor may be used with great advantage in removing a median lobe, and the technic which I generally employ to draw it down into one of the lateral cavities where it can be enucleated, is as follows:

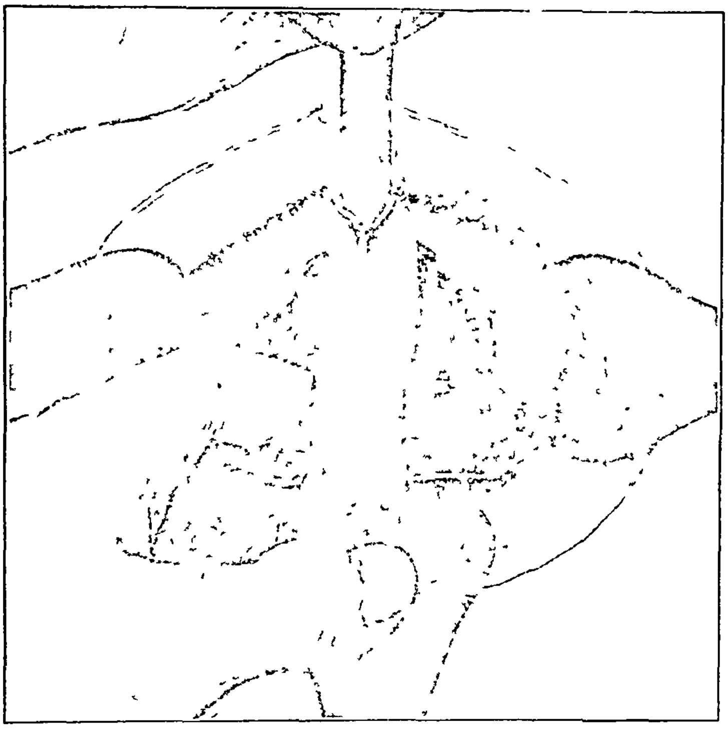

Fig. 23.—Showing technic of delivery of middle lobe into cavity of left lateral lobe.

Push the tractor backward until free in the bladder cavity, depress the handle of the instrument so that the shaft can lie on the top of the middle lobe, and then rotate the instrument 90 degrees, so that one of the blades projects downward behind it. Outward traction should then engage the lobe, as shown in Figure 22, and draw it down where it can be seen by the operator. To get it into one lateral intracapsular cavity (say the left) two maneuvers are of help: Pushing against it with the index finger of the left hand, which has been inserted in the right intracapsular cavity, as seen *in Figure 23*, and rotation of the blade engaging the middle lobe in the same direction, making traction on it all the while.

After the median lobe has presented in the left intracapsular cavity, the operator turns the tractor over to an assistant who continues the traction, while he grasps the lobe with the forceps described above and then rapidly enucleates it.

The above technic, which I am afraid I have described at too great length, has enabled me to enucleate several median hypertrophies without tearing the mucous membrane covering them.

In two instances I have found the median mass to be directly continuous with the left lateral lobe, and when the deeper portion of that lobe was being freed, that the median lobe was disposed to come with it. I have then rotated my tractor so as to engage the median,

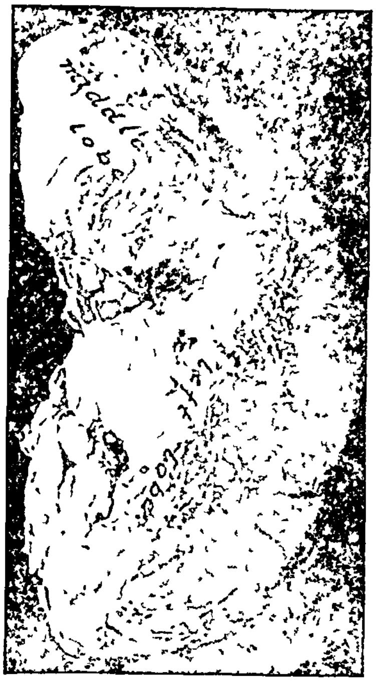

Figure 24

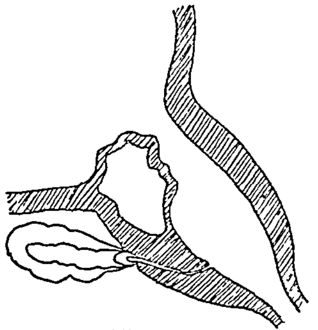

Figure 25

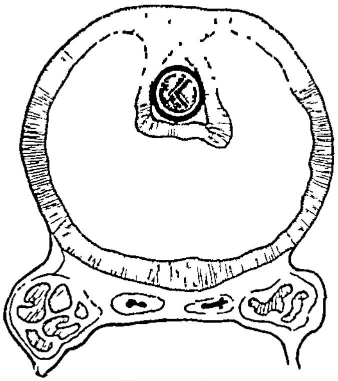

Figure 26

Fig. 24.—Photograph of prostate in which the left and median lobes were enucleated in one piece. Exact size.

Fig. 25.—Longitudinal section after enucleation of median lobe through a lateral cavity.

Fig. 26.—Cross section at level of cavity left by median lobe.

and have readily drawn it down and enucleated the two in one piece, as shown in Figure 24. In another case a collar-like growth, consisting of a median bar and two lateral masses, was easily enucleated in entirety through the left intracapsular cavity without tearing the ducts beneath or the mucous membrane of the urethra or bladder.

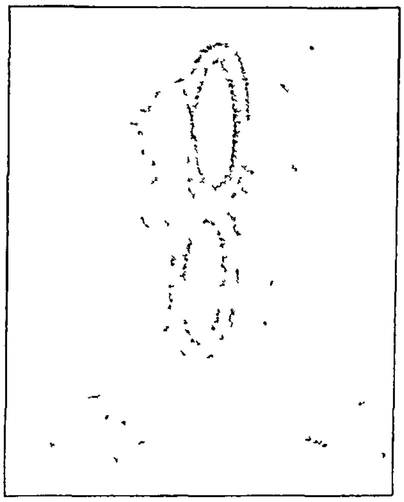

Fig. 27.—Blade engaging anterior lobe.

I have not as yet had a case with a very large median lobe. In such a case there might be difficulty in getting a blade of the tractor to engage and hold on the summit of the lobe while great traction was made on it.[11] Enormous median lobes, as depicted in Figure 1, had best be removed suprapubically, as was done in that case; but I believe that it will be possible to remove median lobes of considerable size perineally, and that without destroying the ejaculatory ducts, as outlined above. (I believe now—June 1—that even great intravesical hypertrophies can be removed through the perineum, as in a recent case of mine.) The conditions present after the enucleation of a median lobe as described above is shown in the schematic Figures 25 and 26. Figure 25 is a longitudinal section showing the cavity left by removal of this lobe, the ejaculatory ducts being below and in front, at quite a distance from it. In Figure 26 the median cavity is seen to communicate with the two lateral in each side, beneath the intact urethra. The seminal ducts are separated from the capsule by the posterior capsule.

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[11] Since writing this I have removed a pedunculated median lobe through the left lateral cavity, by the maneuvers described above.

The Removal of an Anterior Lobe.—The presence of a definite isolated anterior lobe is such a rare occurrence that it hardly need be considered. We occasionally see with the cystoscope small anterior outgrowths, but they are generally continuous with a lateral lobe.

One of my cases was of this character, and, although it looked through the cystoscope like a large rounded mass, I found that it came away easily with the left lateral lobe. I employed a procedure the reverse of that which I have just described for posterior middle lobes, the anterior lobe being engaged by a blade which was directed upward, as shown in Figure 27. The entire mass (left lateral and anterior lobe) was very large, measuring 7x6x5 cm.

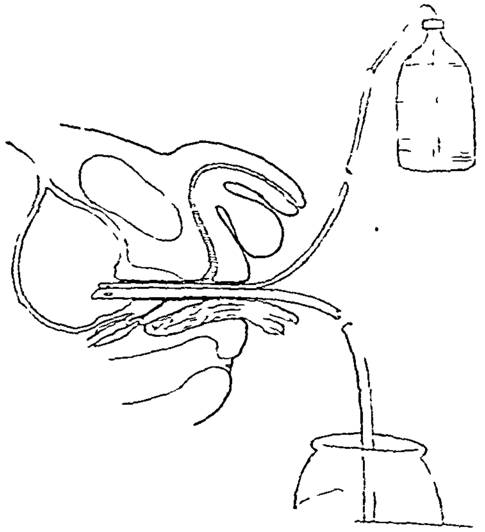
Fig. 28.—Scheme of continuous irrigation apparatus

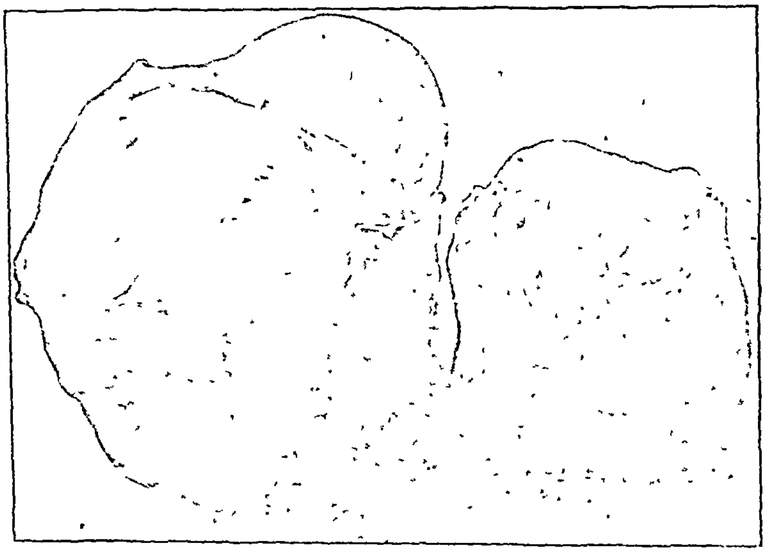
Fig 29.—Two lobes removed by perineal prostatectomy. Actual size.

The ability to make traction on any desired portion of the prostate is of the very greatest value and assistance, especially in enucleating these unusual outgrowths of the hypertrophied gland.[12]

Drainage.—Before withdrawing the tractor, a careful examination should be made by inserting the finger into both of the lateral cavities and palpating the blades through the vesical mucosa, in order to determine that no important glandular mass has been left behind. The tractor is then removed by first rotating the blades until they come together and then withdrawing the instrument. Abundant vesical drainage should be provided, as a small tube may easily become plugged by blood clots and give great annoyance afterward.

I now use the two tubes, one a small catheter and the other an ordinary tube about 1 cm. in diameter. These are fastened together by ligatures at four places, about one inch apart and are prepared before the operation, so that as soon as the tractor is withdrawn they can be inserted through the perineal wound into the urethra and bladder. The catheter is immediately connected with a tank of normal salt solution, and the bladder thoroughly washed clean of blood. It is often advisable to keep the continuous irrigation going while the patient is being returned to his room so as to prevent clogging of the drainage tube with blood clots during transit.

After the tubes have been properly adjusted, they are tied by a heavy silk suture to the skin at the upper angle of the wound. The lateral prostatic cavities are then firmly packed with gauze and additional packing is placed in the retroprostatic space. The tube and gauze drainage as thus provided is shown in Figure 28.

Partial Closure of Wound.—If the median perineal incision has been used, the posterior portion is closed by buried catgut for the muscle, and silk or catgut interrupted for the skin. While no important muscles have been divided (only the central tendon and the recto-urethralis muscle), it is nevertheless advisable to draw together the structures which have been so widely separated by retraction.

If the inverted V incision has been employed, I sew up the muscle and skin completely on one side. The object of this is to restore the perineum to as nearly normal a condition as possible. The other limit of the inverted V and the stretched muscles beneath are partially closed posteriorly, leaving a small opening for the rubber gauze drainage in front.

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[12] During the preparation of this paper I find a reference by Petit to an instrument designed by Albarran to depress the prostate No illustrations are given but, from his brief description, the idea seems to be similar to mine The fact that it did not prove successful would seem to indicate that there were marked differences in the construction The instrument which he called a "désenclaveur," is described as follows

"La désenclaveur est un désenclaveur à deux branches; chaque branche, aplatie, siège à l'extrémitie de deux tubes emboîtés l'un dans l'autre. L'instrument est introduit fermé dans la vessie par la boutonnière uréthral comme le serait un cathéter coudé, c'est-à-dire avec ses deux branches superposées Une fois dans la vessie, les deux branches sont écartées à l'aide d'un levier externe construit sur le principe de celui d'un lithotriteur. Un index indique la direction donnée aux branches, et l'on cherche ainsi à abaisser le col vésical dans la but de désenclaver la prostate. Ce désenclaveur a été utilisé dans un certain nombre des cas, mais il nous a toujours donné des résultats insuffisants"

[Paris, Aug 1, 1903—Since my arrival here I have found in the shops two other "désenclaveurs," one by de Pezzu and one by Legueu The former is similar in some respects to my tractor, but it is very much smaller, and is only used to depress the prostate while the prostatic urethra is incised It is then removed, not being used to assist in the enucleation of the lobes—for which it is manifestly too small to be of any service. Neither author has published a description of his instrument, so far as I know. H. H. Y.]

Using this method of closure there is no more distortion of the perineum after this incision than after the median. And there should not be, as there is no more destruction of muscular continuity in one than in the other; in fact, they only differ in the cutaneous incision.

After-Treatment.—The patient is generally returned to his room accompanied by an assistant who sees that the irrigation is going well, and arranges to have it continued after he has been placed in bed. The apparatus used is indicated in the drawing. The flow is regulated by a screw clamp in the inlet tube. The outlet tube drains into a jar by the side of the bed. If the end is kept immersed in water, air can not get up the tube, and siphonage is obtained, thus keeping the bladder empty and preventing leakage around the perineal tubes. This siphonage is particularly important in suprapubic cases where the drainage is uphill. If the patient has a cystitis (and most have) a continuous irrigation of the bladder with salt solution is kept up often for a week, and, I have found, with great benefit to the vesical inflammation. The task of keeping the reservoir supplied with salt solution is not a difficult one, the nurse having to add a quart about every half hour. It is not necessary to maintain an even temperature—110 to 120 F. in the tank is about right—and the temperature is maintained between these fairly well by the half hourly addition of the hot salt solution. We have also a more elaborate apparatus with the Bunsen burner beneath, but find the simpler method sufficient.

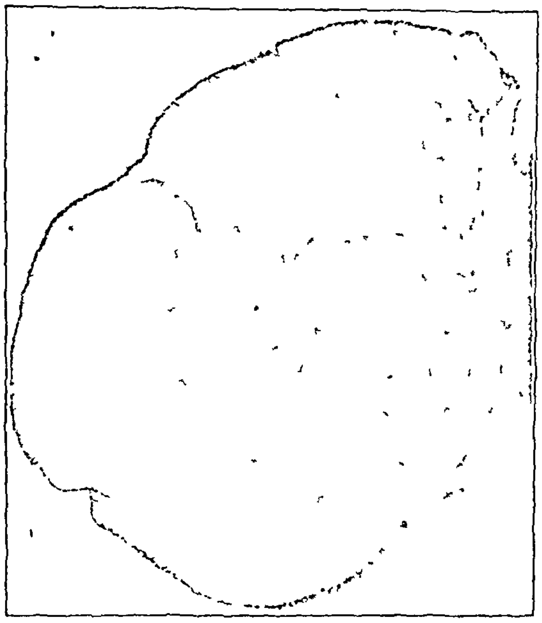

Fig 30.—Coalescent lateral and anterior lobes removed in one piece Actual size

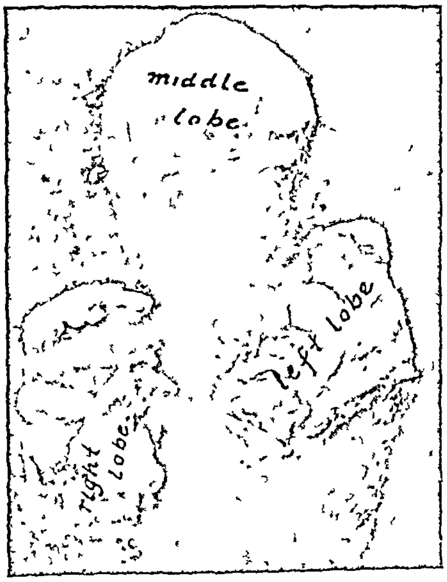

Fig 31.—Photograph of a pedunculated median lobe which was removed through the cavity left by left lateral lobe without tearing urethral or vesical mucosa The three lobes are shown in exact size

A submammary infusion of 1,000 c.c. salt solution is given either on the operating table or after the return to bed. This is considered so valuable, both as a preventive to shock and anuria, and as a cure for postoperative thirst, that it is never omitted.

The patient is generally kept in bed a week, when the drainage tubes are withdrawn. The gauze drains are loosened on the second day and gradually withdrawn, all of the original being out by the sixth day. The superficial portion of the wound is afterward kept open by a small pack, so as to induce healing from the bottom. On the ninth day, after passing a sound, a small catheter is inserted through the meatus into the bladder, and held in place by straps. Permanent drainage is thus maintained for five days, the bladder being irrigated twice daily with boric solution. When the catheter is withdrawn a good portion of the urine will be found to come through the perineum, but in a short time almost all will come through the meatus, though it is sometimes five or six weeks before the minute perineal fistula closes. I generally use sounds to see that the patency of the urethra is all right, but do not find that it is necessary to pass them regularly and for a protracted period after the operation. I have never seen a stricture following the operation.

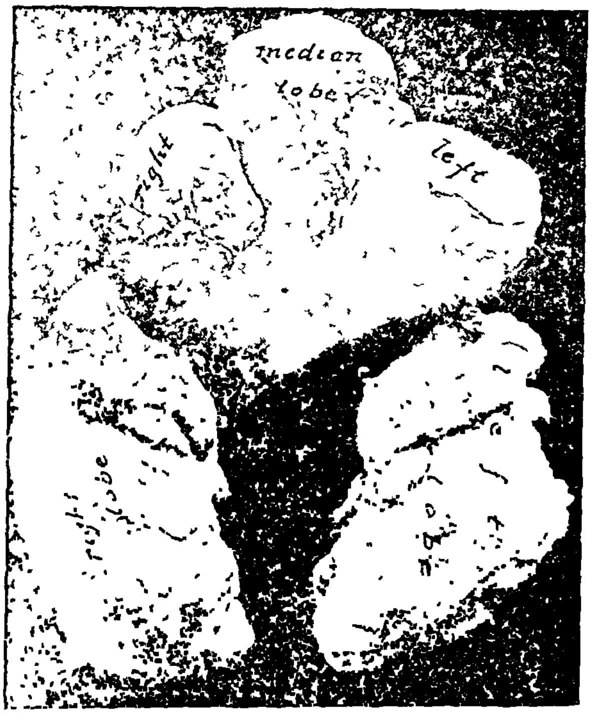

Fig 32.—Photograph of large intravesical hypertrophy of median and lateral lobes removed through the lateral cavities without tearing the urethra.

RESULTS.

I have now operated on 15 cases with the prostatic tractor, and generally by the technic described above. All of these cases are living and well. All can empty their bladders completely and none use the catheter. Incontinence of urine has never been more than a temporary affair, and the perineal fistula has closed in all, except the recent cases. One case, 69 years of age, with a tremendous prostate, who had led a catheter life for 10 years, is now, 7 weeks after the operation, voiding urine at intervals of 3 hours. Most of my cases being of such recent date, I shall not lengthen this paper by going into details, especially since it is too early to speak of permanent results.

As to the important question of sexual powers, I have determined that the power of erection is already present in some; that ejaculation is apparently normal, and that the semen obtained by ejaculation contains numerous actively motile spermatozoa and the lecithin bodies which are found in normal prostatic secretion. Their presence show that the bridge of prostatic tissue surrounding the ejaculatory ducts, which I have been careful to leave intact, is furnishing a part of the fluid ejaculated. This is possibly of great importance since it has been shown by Fürbringer that, without the mixture of prostatic secretion, the spermatozoa are nonmotile and apparently lifeless. It is possible that only a small amount of prostatic secretion is necessary to vivify the spermatozoa, and that enough is furnished by the tissue which I have left. On the other hand, it may be that the remaining glands have increased in number after the removal of the lateral compression. Although a longer period of time must elapse before the effects of the operation can be thoroughly realized, I feel convinced, from the cases which I have already studied, early though they are, that the sexual powers will be perfectly preserved, and that their ability to procreate will remain unchanged.

I may also add that the instrument which I have called my "prostatic tractor" has transformed, for me, the operation of prostatectomy. Where before it was (with me—perhaps not with others) an operation done somewhat haphazard, depending largely on the sense of touch, and in the dark; now the entire operation is performed in a shallow wound, accurately under visual control, proper regard being paid to the urethra and to the ejaculatory ducts, so that they are preserved to continue their pleasant duties.

A CASE OF AEROGENES CAPSULATUS INFECTION OF THE NECK.*

LOUIS LEROY, B.S., M.D.
Professor of Pathology and Bacteriology, Vanderbilt University.
NASHVILLE, TENN.

The case which I have to report is one of some interest from the rather infrequent occurrence and from the fact that the *Bacillus aerogenes capsulatus* was obtained from the wound six days before death.

W. F.—Age 23, black, male, single, laborer, muscular and vigorous; family history negative. Entered hospital January 27, died Feb. 4, 1903.

Gave history of having had a "sore throat," with considerable swelling of left side of the neck in the region of the tonsil. The symptoms referable to the throat lessened, but the external conditions became worse, developing considerable swelling and pain.

His physician, seeing him for the first time at night, made the diagnosis of erysipelas. Later the diagnosis at the hospital was made of suppurative cellulitis of face and neck. At this time his pulse was 128, respiration 30, temperature 102.

An incision was made, from which a small amount of dark fluid exuded, but no pus. Thorough irrigation every four hours with bichlorid of mercury was instituted without visible result. The inflammatory reaction around the wound was not at all severe, and after the second day the skin below the incision slowly separated from the subcutaneous tissue, until at the fourth day a gangrenous area was present reaching from the ear to the clavicle, and discharging a light sanguineous fluid from an opening at the lower edge. About the fifth day the skin was entirely separated, leaving the muscles beneath clearly exposed. The fibrous tissue rapidly became destroyed, leaving the underlying muscles, vesicles and nerves clearly exposed to view as in the most careful dissection.

The swelling was not extreme, and until the last day no emphysema or crepitation was present, and then only in small amount.

The temperature ranged from 102 to 105, being with difficulty kept below 104 by ice caps and baths.

The pulse varied from 128 on admission to 140 at the time of death. Until within a few hours of his death it was full and strong, despite its rapidity.

The respirations were rapid, varying from 28 to 34 most of the time, although there were times when it dropped as low as 20 to the minute.

The urine showed a progressive diminution in quantity, specific gravity, total solids, percentage and total elimination of urea, chlorid, phosphates and sulphates.

The reaction was acid throughout. Traces of albumin and bile were present for the first two days, but did not appear again.

The microscopic examination was negative in all the daily examinations.

The blood examinations were of some interest, showing a progressive decrease in the number of erythrocytes, percentage of hemoglobin, specific gravity and hemoglobin index.

The leucocytes showed a progressively increasing infectious leucocytosis until twelve hours before death, when an enormous drop in their number apparently heralded the end of the patient's ability to react. Up to this time he had been cheerful, declaring that he would be entirely well in a few days.

The decrease in leucocytes was mostly due to a great diminution in the number of neutrophiles, which fell from 86 per cent. to 40 per cent.—almost even with the small lymphocytes, which in turn showed a reciprocal increase.

The full results of the blood examinations may be seen at a glance from the accompanying table.

No bacilli were observed in smears of the blood during these examinations. The last day, about 12 hours before death, some irregularity in the red cells appeared, a number of poikilocytes and microcytes being observed, but at no time were any nucleated red cells noted.

An examination of the pus was made six days before death. In smears a large number of bacteria were observed, but streptococci seemed to be absent. Other cocci staining by Gram's method were present, and a few large bacilli, which in all probability were *Bacillus aerogenes capsulatus,* but on which I was unable to demonstrate any capsule, either in ordinarily prepared specimens or by the special methods of capsule demonstration. Some of the pus was collected in sterile capillary tubes, and from these aërobic and anaërobic cultures were made within 15 minutes of its collection. The aërobic cultures were made in ordinary agar in Petri dishes in the incubator. The anaërobic cultures were made by the method of Veillon. In this method a number (15 to 20) of large test tubes of glucose agar are melted by immersion in boiling water for an hour in order to expel all the air. They are then allowed to cool to within a degree or two of the point of solidification, when one of the infected capillary tubes is plunged to the bottom of the agar and its contents expelled by blowing. As soon as the agar is inoculated it is solidified at once by plunging it into ice water. The capillary tube is then immersed into each of the series of agar tubes blowing gently into it and agitating it at the same time. In this way a number of the tubes will be inoculated, the number of colonies varying from one or two in each tube to a number too great to count. All the tubes are now placed in the incubator until the colonies develop sufficiently to be studied. Cultures obtained in this way developed a large number of colonies in the deeper layers of the tubes, which were subsequently separated into a strict anaërobe and four aërobic organisms. The strict anaërobe was determined to be the *Bacillus aerogenes capsulatus* of Welch, although in the beginning some uncertainty arose from the absence of a capsule and lack of gas generation in the wound. Both of these characteristics were, however, observed in subsequent inoculation experiments. The following biologic characteristics were determined and verified in the work of investigation.

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* Read at the [illegible] Session of the American Medical Association [illegible] Pathology and Physiology, and approved for [illegible] xecutive Committee: Drs L. Hektoen, F. B. [illegible]

The organism is a strict anaërobe, but will grow in deep layers of glucose agar in Veillon's method. I was unable to obtain more than a trace of growth by deep stick culture.

RECORD OF BLOOD EXAMINATIONS.

Date, 1903.	Jan. 28.	Feb. 1.	Feb. 2.	Feb. 4.
Red blood cells	4,802.000	4,265,000	3,840.000	3,121.000
Leucocytes	19.524	36,742	72,800	11,121
Specific gravity	1052.5	1046	1037	1030
	Per cent.	Per cent.	Per cent.	Per cent.
Hemoglobin, specific gravity	72	52	33	20
Hemoglobin (Gowers')	70	49	38	28
Hemoglobin index	74	57	49	32
Small lymphocytes	6.2	7.6	......	37.3
Large lymphocytes	3.8	5.1	......	22.2
Neutrophiles	89.7	86.3	......	40 1
Eosinophiles	0.3	1	......	1.4
Poikilocytes	......	......	......	few
Microcytes	......	......	......	few

* Twelve hours before death.

RECORD OF URINARY EXAMINATIONS.

Date, 1903	Jan. 28.	Jan. 9.	Jan. 30.	Jan. 31.	Feb. .	Feb. 2.	Feb. 3.	Feb. 4.
Transparency	Hazy..	Hazy..	Hazy .	Hazy..	Hazy..	Hazy..	Hazy. .	Hazy...
Color	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Specific gravity	1018	1018	1018	1016	1014	1010	1010	1008
Reaction	Acid . .	Acid. .	Acid. .	Acid. .	Acid .	Acid .	Acid. .	Acid. .
Quantity (24 hr.)	1350		*		*	1299	*	1200
Total solids.	56.61	*	*	*	*	30.29		23.32
Urea...	1 952	1.9	1.8	1.75	1.6	1.2	1 4	1.2
Total urea (24 hr.)	26.32	*	*			15.48	*	12 0
Chlorids	6%	*	*				*	3%
Phosphates	1%	.8%	.6%	.5%	.4%	0.5%	.3%	0.25
Sulphates	2%	*	*	*	*	0 75	*	0 5
Sugar . .	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Mucin .	Abund.	Abund.	Abund.	Abund.	Abund.	Abund.	Abund.	Abund.
Albumin	Trace. .	Trace. .	Absent	Absent	Absent	Absent	Absent	Absent
Bile . . .	"	"	"	"	"	"	"	"
Microscopic.	Neg..	Neg. . .	Neg. . .	Neg. . .	Neg. . .	Neg. . .	Neg. . .	Neg. . .

* Not recorded.

In hydrogen, illuminating gas, carbon dioxid and by the pyrogallic acid method growth will result, but best in an atmosphere of hydrogen. Good growths were also obtained under a layer of *Bacillus subtilis.*

The bacillus grows slowly at the room temperature on all media if the oxygen conditions are favorable. They resisted a temperature between 5 and 0 C. for twenty-four hours. The thermal death point was not determined.

When developed in plate cultures in an atmosphere of hydrogen the colonies may reach a size of 1 mm. in diameter in forty-eight hours in the incubator. These colonies are round, convex and smooth. They refract the light strongly and are finely granular when examined under a low magnification. The edges of the colonies are entire. By reflected light the colonies are whitish opalescent. By transmitted light they are a smoky brown. The bacilli are about the size of anthrax, but the ends are usually rounded. They are frequently found singly, usually in pairs or threes, and once a chain of twenty elements was found. In bouillon cultures they appeared to be somewhat shorter than on solid media. They stain easily, but irregularly, by all the common dyes and also by Gram's method. Old colonies show many individuals who do not take Gram's stain, and chains were observed in which alternate cells only remained stained by Gram's method, the intermediate ones being decolorized. The water of condensation, or rather the small amount of water squeezed out of the agar on cooling, contained the most luxuriant growth, despite the fact that it was exposed to the air. This is accounted for, as pointed out by Novy in the case of *Bacillus oedematis maligni II*, by the fact that the oxygen in the water has been displaced by other gases produced by the bacilli deeper in the tube. It might also be noticed that much of the air was previously expelled from this water during the melting of the agar and that the conditions are not favorable for absorption of much oxygen. In all sugar-containing media large amounts of gas were generated, the bubbles beginning to show in six hours, and in twenty-four hours in most cases the agar would be broken in several places and pushed up against the cotton plug. Some gas was produced in media containing no sugar, but in small amount. Gelatin was very slowly liquefied. One series of tubes kept in the incubator in hydrogen for three weeks refused to solidify on being again cooled, while the controls solidified readily.

The organism appeared to be non-motile, and no flagellæ or giant whips were found.

Spores were found once on an old Loeffler's blood serum culture which had been in the incubator in a Novy jar of hydrogen for seven days, and again on a plain agar reimplantation from the blood serum tube. The spores were central and did not cause any increase in the transverse diameter of the cell. All culture media became intensely acid within twelve hours of growth. This was also the case with the tissues of animals which died from inoculation, and in one test made from the secretion from the lesion of the patient. In this case the secretion had collected to the amount of about 1 c.c. in a necrotic pocket between the skin and underlying tissue. This was so intensely acid that I call attention to it as of possible subsequent value as an early diagnostic point. Litmus milk was precipitated and decolorized without being rendered, and a clear fluid left above the coagulum.

In pure culture in intravenous injection about half of the rabbits inoculated died and the bacillus was recovered from the heart's blood and tissues. Dogs were more refractory. When mixed cultures of *Staphylococcus aureus* and *Bacillus aerogenes capsulatus* were given subcutaneously large sloughing areas of necrosis followed in four out of five cases. The last case formed an abscess cavity which discharged pus containing both bacteria through a small fistulous opening, and finally healed completely.

In another series of inoculations in dogs, through cleansing of the necrotic area with hydrogen peroxid, it resulted in recovery.

A rabbit in which 1 c.c. of a bouillon culture had been injected in the ear was killed, as suggested by Welch of

Baltimore, and in twenty-four hours the characteristic swelling occurred. This was allowed to progress at the room temperature for four days, when the distension was enormous. The gas was then collected over water through a canula and found to contain CO_2 hydrogen and a trace of H_2S.

It burned with a very white, bright flame, resembling, although not so intense, the flame of acetylene gas.

I believe that this is the first case reported in which the infection in all probability entered the tissue through the throat and without history of an abrasion or lesion of the epithelium.

DISCUSSION.

Dr. L. Hektoen, Chicago—In connection with this interesting case I would refer to one in which the infection took place through a transfusion puncture of the skin in the submammary region. Spreading emphysema appeared and after death a general infection of the *Bacillus aerogenes capsulatus* was demonstrated.

Dr. Louis Leroy, Nashville, Tenn.—The bichlorid treatment was carried on in this case for a number of days without effect. In the experiments with animals peroxid of hydrogen seemed to stop the process almost within a day. I believe that further observations on the reaction of the pus in such infections will prove of value.

INFECTION OF THE GALL BLADDER AND BILIARY DUCT CONTENTS.*

EDWIN RICKETTS, M.D.
CINCINNATI.

A little more than a decade ago, if a surgeon opened an abdomen for suspected gallstones and did not find them he was most fortunate if the medical finger of derision for diagnostic failure was not pointed at him—gallstones were considered a disease *per se*.

The nomenclature of gallstones, as it has been and is used, is incorrect. It is not important that we should give the anatomy in detail of the liver, and especially of its system of biliary plumbing. A healthy gall bladder should have tonicity and when well filled it should touch the abdominal peritoneum in front, that portion of the liver posteriorly, the duodenum colon, the stomach and pylorus—all of which are in close proximity.

In the healthy subject, the gall bladder can be artificially anastomosed to the stomach, colon and duodenum. Such has been accomplished in neglected cases by no other effort than that of Nature. As the results of infection, we can justly consider such as serious complications, rather than successes. It is important that the family physician appreciates this, along with knowing that the surgeon is competent to do better work, and for this have better results, if he is consulted as to when is the best time for operating.

The simplest procedure of the list suggested for the relief of the infection under consideration, in more than the majority of cases, is cholecystostomy, which consists in opening the abdomen directly over the gall bladder, incising the bladder, cleaning it out and stitching the edges into the small abdominal incision, leaving a temporary sinus for the escape of the secretions of the liver, until it appears certain that that organ has resumed its normal function and has free drainage through the common duct. If a secondary operation is demanded, one can readily and easily reopen the gall bladder that had been purposely attached into the abdominal incision.

In those cases in which the gall bladder has been distended from empyema, it is gratifying to know how they will contract after they have once been drained. Postmortems show clearly the relationship of those organs adhered in closest proximity to the gall bladder and its ducts—for the bile stain present comes from exosmosis. It is claimed that three-fourths of the cases in which gallstones result occur in women. The work of the surgeons does not find that these cases are more frequently found among those of the higher walks of life following sedentary habits. Precipitation, or the result of bile infection, can give a solitary calculus or hundreds of calculi; numbers do not add to the gravity of any case. The germ theory has been well established. The typhoid and colon bacillus are recognized as the greater microbic elements to be dreaded; more especially the colon bacillus.

Experiment has demonstrated that aseptic foreign bodies within the gall bladder, floating in healthy bile, are not exciters of inflammation. It has been further demonstrated that the gall bladder and its contents can be infected by the typhoid and colon bacillus, necessitating a cholecystotomy, and the cystic duct remain free from infection and still perform its function.

It is in this class of cases that rupture of the gall bladder occurs. With the inflammation extending to the cystic and common duct, we can have the biliary colic attacks that so often have been credited to the passage of calculi through the common duct. We have an illustration in the attacks of appendicular colic in which there is no foreign body present. In those distended gall bladders that come from such a redundancy of tissue, there is residual bile, which of its weight causes flexion of the gall bladder at the cystic end.

The cystic and common duct may be healthy and yet fail to carry off these gall-bladder contents. This stagnant bile can easily become infected by the microbes passing through the walls of the colon, duodenum and portal vein through the gall-bladder walls, attacking the bile. This explains how a serious gall-bladder infection can be present while the cystic and common ducts remain patent, or partially so. The patient may succumb to septicemia before Nature can effect an anastomosis of the gall bladder to the duodenum or colon. The adhesions to the proximal tissues are numerous and make formidable the doing of any subsequent operation on the gall bladder or its ducts, as in trying to relieve the distressing symptoms that so often arise. The residual bile results from the redundant tissue of the anteflexed gall bladder, which is lacking in contractile power. The contents are especially liable to infection.

We find many contracted and flexed gall bladders held firm in a bed of adhesions, causing pain and discomfort to the patient. Freeing these adhesions and correcting the flexion often effects a cure. The precipitation of the salts of infected bile can be found in the biliary ducts and in the hepatic cells.

It is not the over-extended gall bladder, and the one which may be readily felt through the thin abdominal wall, that is so badly in need of the prompter surgical intervention, as much as it is the infected and tense gall bladder with localized pain with loss of strength, a low grade of fever, accelerated pulse, and with more or less sallowness of the skin. The localized tenderness is brought out by a deep, firm pressure over the gall bladder by one of the middle fingers, causing a sickening pain. We have pinhole ruptures occurring in the gall bladder, cystic and common duct, with the possibility of hepatic and perihepatic abscesses to follow.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Obstetrics and Diseases of Women, and approved for publication by the Executive Committee: Drs A. Palmer Dudley, H. P. Newman and J. H. Carstens.

Jaundice is a serious complication in those cases that are to undergo a surgical operation. Bile reabsorbed is a formidable poison, acting, as it does on the heart and kidneys. It is much more poisonous than urine. Fatal secondary hemorrhage in cholemic subjects has resulted fatally following a simple abdominal section. In these cases midoperative hemorrhages are not always readily controlled. Rupture of the gall bladder has followed an attack of vomiting. Roth, Schroeder and Schloth made 10,866 necropsies, finding biliary fistulæ forty-three times. Courvoisier reports 539 fistulas; 184 between the bile ducts and the abdominal wall, 108 between bile ducts and duodenum, ninety-three between the gall bladder and the duodenum, twelve between the gall bladder and the stomach, fifty between the bile ducts and the colon, and forty between the gall bladder and the colon. These reports lead us to think that biliary fistulas are not so common as the profession in general have been led to suppose.

The sudden escape of a portion of the contents of an empyemic gall bladder means rapid infection of the peritoneum.

Dr. Barker, Bellvue, Ky., tells of a case in which the tip of the gall bladder was shot away from a healthy subject. Bile poured out freely through the abdominal wound, and with it soon came one large gallstone. The wound was packed and kept clean, and the patient recovered.

In infected gall bladders it is well to make the incision directly over the gall bladder, and after failing to dislodge the stone downward and into the duodenum by the probe, or upward and into the gall bladder by upward pressure of the finger, it is better to incise the duodenum, exposing the common duct opening into the same and, after careful dilating, pass a probe into and through the common duct; pushing, if possible, the calculi up into the cystic duct, or, better, into the gall bladder for extraction from above through the incision by means of the alligator forceps. Any calculi located in the cystic or common duct acting as a ball valve, so graphically described by the late Christian Fenger, can be drawn out through the incised gall bladder by means of the forceps.

With early diagnosis of infection of the contents of the gall bladder—in which the tenderness over the same does not disappear along with the fever, accelerated pulse, lethargy, loss of flesh and strength—a cholecystostomy will relieve these patients better and more satisfactorily than efforts at medication can possibly do.

The early diagnosis of biliary infection is not difficult. With a careful consideration of the principles laid down it is as easy as that of appendicitis. With an early diagnosis these cholecystostomies may be successfully performed under local anesthesia. If difficult complications should arise, general anesthesia may be resorted to in order to complete the operation.

The laity must understand, through the family physician, that it is not a harmless disease, and that this optimistic view that is held is most dangerous to many valuable lives. Those cases that are said to recover from medication are so rare, comparatively, as to be unfortunate for those cases that come after. The liver is the largest secreting organ within the body; its secretions are the most abused in health, the most neglected in disease.

DISCUSSION.

Dr. L. H. Dunning, *Indianapolis*—I think we all agree that empyema of the gall bladder frequently results in speedy death if drainage is not obtained. But it is a question how far the operation should be carried and how much should be done in severe cases associated with stone in the common duct. These patients are poor subjects for surgical work, and in the majority of instances, if there is an impacted stone in the common duct, or dilated portion of the duct, there is intermittent jaundice; so that we have added to the dangers of shock those of septicemia and secondary hemorrhage. These dangers must be taken into account in every gall-bladder operation. From the picture the essayist has drawn I would advocate in all instances the attempt to remove the stone from the common duct. But if we have a patient greatly exhausted from septicemia and very much jaundiced, either intermittent or permanent, with a stone in the common duct, we will do well in many instances if we content ourselves by draining the gall bladder, because 75 to 80 per cent. of our patients will die if we go beyond that simple procedure. As to cases in which we feel justified in doing something, where there is a stone in the common duct, I would not like to accept in an unqualified manner the technic given by the essayist. I would hesitate to add to the danger of exhaustion the danger of opening the duodenum. I do not believe that we will often find this necessary. If we can not move the stone upward or downward by manipulation it will, in the majority of instances, be better to open the common duct. If the stone is in the middle of the duct or near the duodenum we will have better results if we incise the common duct and remove the stone, which can be done very quickly, and then resort to the method of Kerr—drainage of the hepatic duct by insertion of a tube. These cases have a mortality somewhere between 75 and 85 per cent. even in the hands of such masters as Kerr and Robson. I have found that by simply draining the gall bladder the signs of septicemia pass away, the patient partially regains his health, and the mortality is then only about 10 per cent. Therefore, in these severe cases I advocate two operations: 1. Opening and draining the gall bladder. 2. After the patient has regained health reopening the abdomen and removing the stone from the common duct.

Dr. C. V. Thienhaus, Milwaukee, Wis.—I would like to defend the duodenal route in impaction of gallstones in the common duct. The transduodenal route does not come into question when the stone lies in the upper or in the middle portion of this duct, but it does when the stone is impacted near the papilla or in the so-called retroduodenal portion of the common duct. I do not see any reason, as I have pointed out,[1] why, when a stone protrudes at the papilla and is almost in the duodenum, or when it lies impacted in the retroduodenal portion of the common duct, where it is very difficult to reach from the middle portion, we should not for these cases use the natural and more easily to be performed transduodenal route. I operated on one case in this manner in which a stone was so firmly impacted in the retroduodenal portion that even after opening the duodenum and making a large incision into its posterior wall, it was difficult to dig it out of its diverticulum. After removing the impacted stone three other stones lying higher up in the common duct could easily be stripped down into the duodenum and removed. The woman is perfectly well now and gained 67 pounds since the operation, which was performed 15 months ago. For this class of cases I can heartily recommend McBurney's transduodenal route.

Dr. S. S. Halderman, Portsmouth, Ohio—In the early history it is not always possible to make a diagnosis. The pain is not pathognomonic. I have been very much in doubt at times, owing to the age of the patient, whether there was a malignant trouble or a benign disease of the gall bladder. In cases of contracted gall bladder in which there are but one or two stones, and in which there has been more or less irritation going on for some time without severe attacks of such hepatic colic as accompanies the passage of smaller stones through the duct, I have come to the conclusion that an exploratory incision is demanded for the safety of the patient. When there is a distended gall bladder in cancer of the pylorus pressing on the gall ducts and obstructing that organ, by draining the gall bladder one can make a patient very comfortable, and, in fact, prolong his life. In a recent case I made an incision and found malignant disease. I drained the gall bladder and the patient lived three or four months with comfort. She had been taking very large doses of opium for the terrible pain, but after the operation she abandoned it.

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[1] "The Transduodenal Route, etc.," Annals of Surgery, December, 1902.

Dr. H. O. Marcy, Boston—The question of vital importance is how and when to make the diagnosis, rather than the question of operative details. The most lamentable feature of the whole matter is the failure of the general practitioner to recognize these conditions early and bring them to operative procedure early. If we could make an emphasis in this direction we would do a much greater service to the public than by confining ourselves to the technic of the operation. It is true that we ourselves were blunderers. I was the first to remove stone from the common duct, and yet that was almost an accidental condition. But the unfortunate thing was that the patient had been allowed to go on to the risk of life before operation. *Let the general practitioner study his cases of obscure* gall-bladder disease and not think that when he has biliary obstruction and an extreme case of jaundice that that is the time to consult.

Dr. A. Palmer Dudley, New York—In cases of empyema of the gall bladder, or of systemic infection, I aspirate the gall bladder, having first grasped it with two pairs of fine forceps so that it can not collapse and get beyond my reach. After aspirating the gall bladder, before opening it, we are able to make a more perfect diagnosis of the condition existing in the bladder. Then I refill that gall bladder with a 1-500 formalin solution. I have been using formalin in infection for a long time, and have found it to be a thorough germicide. One can wash out the bladder and aspirate as many times as one pleases until one has a thoroughly aseptic bladder before one opens it to remove the stones. In cases such as Dr. Ricketts described I agree with him. I believe it safer to fasten that bladder up and drain it than to do a radical operation. In many cases a radical operation may seem better for the patient, but with the patient thoroughly saturated with bile, the vessels engorged with bile, there is no contractile power in them. There is no power to form a good plug in such a vessel and the danger of hemorrhage is great.

Dr. Edwin Ricketts—The emergencies bother us more than anything else in operating. It has been well said that the essential treatment of cases in which the stone is in the common duct is along the line of prophylaxis, a procedure which I advocate, for then we will not have the stone in the common duct. One point I want to impress is that there is never a stone in the common duct, but that there have been symptoms long before that that the family physician should recognize and treat by prophylaxis. That prophylaxis is draining of the gall bladder. Washing out the gall bladder with formalin is a good suggestion. The greater number of cases of malignancy occur after the age of 50, but there are quite a few cases of infected gall bladders at 30 and some before 20, and wherever you find an infection I do not see why the general rule of surgery should be reversed and that is, turn out the infection. And yet the gall bladder is the last organ from which the suggestion for drainage should come. Dr. Goelet knows of the pressure on the kidney by a damming back of the urine, causing a hydronephrosis. Is there a surgeon who would hesitate to remove a stone in the urinary bladder, no matter how small? We are beginning to better understand the importance of infection. Delay under these circumstances has caused more deaths than all the surgical experimentation on the bile ducts. Infection of the gall bladder is a bad thing. These are unpromising cases; bad cases to work on. It is far better to handle these cases in the line of prevention than to operate when the gall bladder is full of pus. The importance of not delaying has been demonstrated time and again, and it has been so impressed on me that I now do this work as I outlined it in my paper, and I fear no criticism

SARCOMATOUS TRANSFORMATION OF MYOMATA.*

THOMAS S. CULLEN, M.D.

BALTIMORE.

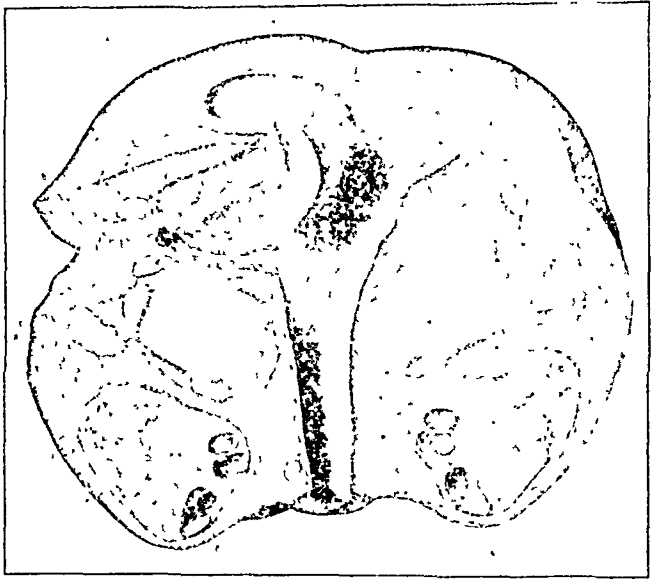

Fig. 1—Probable sarcomatous transformation of a myoma, also discrete myomatous or sarcomatous nodules in the same uterus. At g is a typical submucous myoma. At c one of the sarcomatous nodules, while at d is a transition from the myomatous muscle into sarcoma. Fig 2 is from the same case.

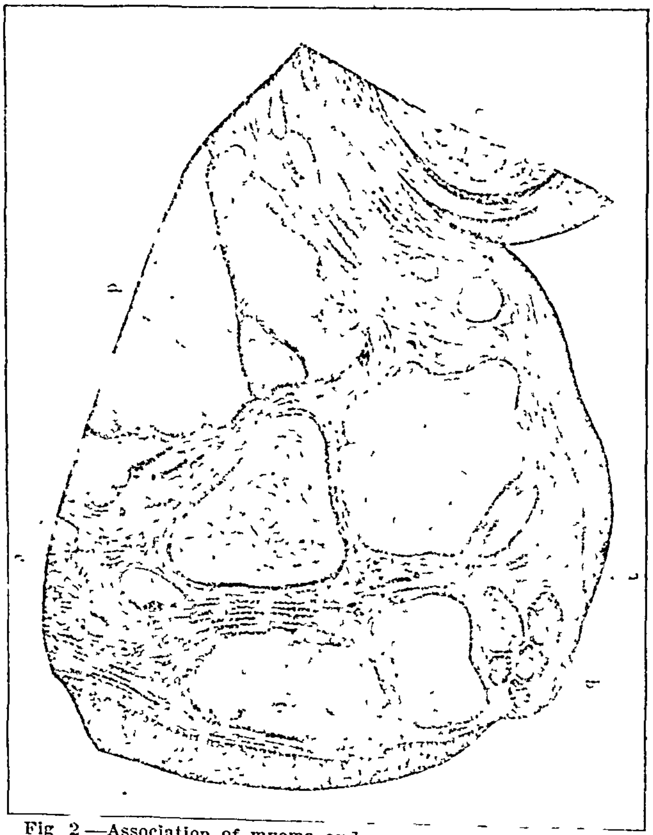

Fig 2—Association of myoma and sarcoma in the same uterus. The myomatous nodules are very easily differentiated from the homogeneous sarcomatous ones

This report includes several cases of myomata where sarcomatous changes have occurred. From the number of cases recorded it is evident that the disease is more frequent than heretofore suspected. The sarcoma usually develops in one of several myomata and may be situated in a subperitoneal interstitial or submucous nodule. Until recently it was supposed to be confined chiefly to submucous myomata.

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Obstetrics and Diseases of Women, and approved for publication by the Executive Committee: Drs. A. Palmer Dudley, H. P. Newman and J. H. Carstens

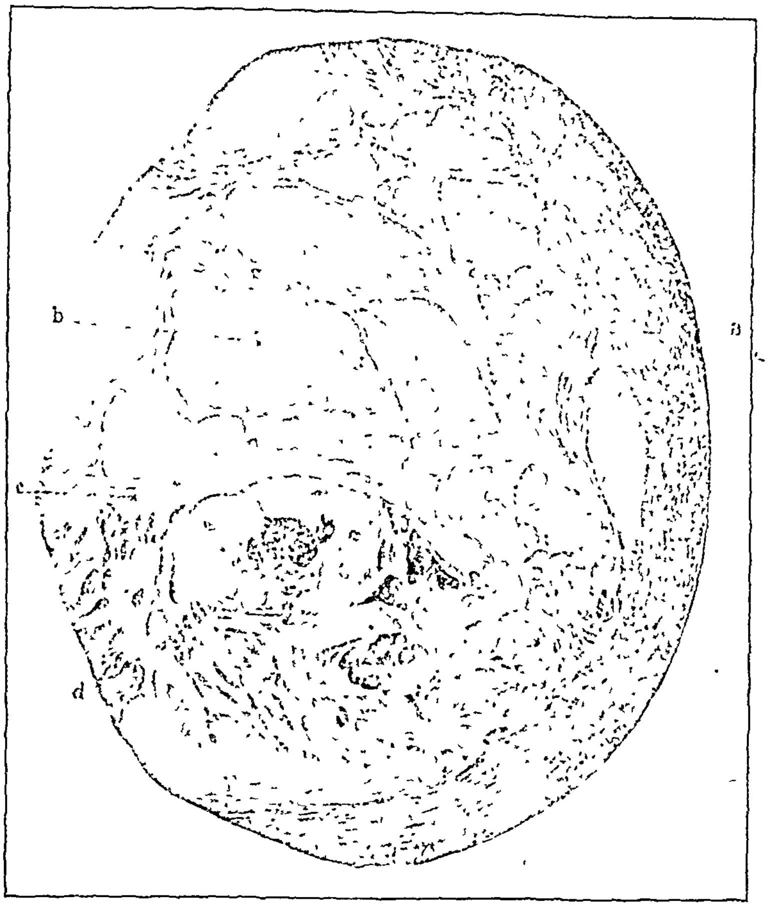

Fig. 3.—Sarcoma of the anterior uterine wall. The pale framework c seems to be myomatous in character.

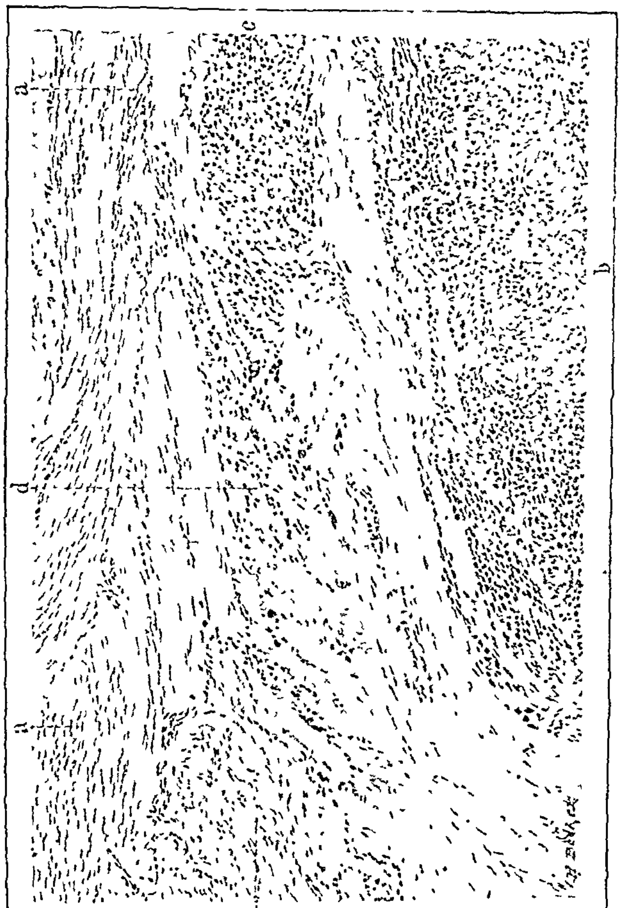

Fig. 4.—Sarcomatous transformation of bundles of myomatous tissue.

The gross changes are characteristic, the firm cross-grained myomatous tissue being replaced by a homogeneous yellowish white growth devoid of a fibrous arrangement and closely resembling raw pork. Degenerations in the sarcomatous tissue are frequent.

Histologically these growths are found to develop from two sources:

1. The connective tissue.
2. The uterine muscle.

Those of connective tissue origin may consist:

(*a*) Of spindle-shaped cells.
(*b*) Of round cells.

In those derived from the muscle a direct transition from the muscle fibers into the sarcomatous ones can be followed. Several such cases have been noted at the Johns Hopkins Hospital.

The clinical history is rather significant: A myomatous uterus has lain comparatively dormant for several years and the patient comes with a history of rapid uterine enlargement during the last few months. If the myoma has been submucous portions have from time to time been expelled "recurrent fibroid," and there is a free offensive discharge. The patient soon becomes cachectic.

The operative significance of recent laboratory investigation may be thus summarized:

1. Whenever sarcoma or carcinoma may coexist with myoma panhysterectomy is imperative—not amputation *through the cervix.*

2. Bisection of the uterus is contraindicated where there is a possibility of a malignant growth developing in or associated with the myomatous uterus.

3. In every case of hysteromyomectomy it will be advisable to have an assistant open the uterus immediately on its removal to determine if carcinoma of the body exists and to find out whether the myoma has become sarcomatous. If malignancy is detected the cervix can thus be removed without delay.

DISCUSSION.

Dr. John G. Clark, Philadelphia—All scientific research should in some way lead to improvement in the practical treatment of patients, for our vocation as physicians and surgeons is to practice the healing art. From a purely clinical standpoint the work which has been presented by Dr. Cullen may appear to be clearly of scientific and not of practical interest, and yet, if his observations are applied to the clinical care of cases of fibromyomata of the uterus, it at once has a very important bearing. Noble concludes, that while fibroid tumors are benign, nevertheless the ultimate results and complications arising from them are such that it is seldom, if ever, justifiable to withhold operative interference. Practically applied, it seems to me that Dr. Cullen's work is an argument for Dr. Noble's questionable position, for he has shown that fibroid tumors which hitherto we should have taken as simple benign growths may actually already have undergone sarcomatous transformation. About 2 per cent. of all fibroid tumors are associated sooner or later with a malignant process, e. g., in some instances, cancer of the endometrium. This I have recently encountered in my clinic at the University Hospital in two cases, in which no suspicion of malignancy had been entertained. Williams, Pick and Cullen have shown that the muscle or fibrous tissue cells may actually be transformed directly from a benign to a malignant process. In contradistinction to this, cancer may be looked on as simply an engrafted process, which invades and destroys, but is never a pathologic transformation of a connective tissue to an epithelial cell. In hysterectomy for fibromyomatous tumors, my rule is invariably to leave the ovaries, if possible, and a portion of the uterus with its endometrium, in order to perpetuate the menstrual function to its natural cessation. The retention of only one-third of the original volume of the uterus will maintain menstruation. If this transformation observed by Dr. Cullen occurs with any great frequency the latter policy may be questioned, for we may be leaving behind a portion of a malignant growth. I judge, however, from his paper that this transformation is not frequent, and therefore, especially in young women, the fear of its recurrence should not materially influence us in discarding the conservative policy. While some distinguished surgeons are inclined to deny the possibility of auto-implantation, I am convinced that it is possible to carry cancer cells from the field of operation into healthy tissue where cancer will recur. I wish to ask Dr. Cullen how often these malignant transformations of fibroids occur and how far his observations justify the physician in favoring the early removal of these clinically benign tumors with a view to preventing the complication.

Dr. L. H. Dunning, Indianapolis—I would like to have Dr. Cullen consider the influence of these findings on our technic in myomectomy. I also wish to ask whether or not he has collected statistics on the recurrence of these growths after complete and after partial removal of the uterus.

Dr. C. O. Thienhaus, Milwaukee—Does Dr. Cullen conconsider the presence of giant cells and myoclasts in fibroids a sufficient proof of malignancy? Saenger stated that all fibroids containing giant cells and myoclasts had to be classified as showing sarcomatous degeneration. Concerning Dr. Dunning's question, Martin found sarcomatous degeneration 6 times in 205 cases of fibroids, but this percentage is an exception and extremely high, in my opinion. Landau collected from the literature 10 cases in which following retroperitoneal hysteromyomectomy later on a malignant growth developed in the cervix.

Dr. C. L. Bonifield, Cincinnati—About eighteen months ago a patient came under my care who had had an ectopic gestation that went to full term and who had had a missed labor fourteen years before I saw her. She developed an immense fibroid, larger than my head, which was undergoing sarcomatous degeneration at the time of the operation. I removed the uterus and the tumor and the ectopic gestation, but unfortunately she died a few weeks afterward from a recurrence of the sarcoma.

Dr. T. S. Cullen—It is impossible for me at this moment to tell the exact percentage of myoma cases in which sarcomatous degeneration takes place, but from 1.5 to 2 per cent. show changes definitely sarcomatous in character or strongly suggestive of it. Carcinoma of the body of the uterus is relatively common where uterine myomata exist. Taking all myoma cases we have at least 2 per cent. in which a malignant growth of some character is present. In hysteromyomectomy in favorable cases where there are not many adhesions the mortality will not be higher than this. I fully agree with those who advocate early operation in nearly all cases. Operate before adhesions have formed. I do not wish to deprecate bisection of the uterus. It is a most admirable operation where the uterus is wedged in the pelvis, thus preventing us from reaching the uterine vessels. If we bisect the organ the myoma can be rolled out, more space is thus obtained and the vessels are more easily controlled. But in these cases we must remember the possibility of sarcomatous degeneration of the myoma. We must, however, run the risk of cutting into the sarcomatous myoma as in some of the cases the myoma is so wedged in the pelvis that its removal would be impossible by any other procedure. Recurrences in cases where sarcomatous degeneration has taken place are certainly appalling. In some of the cases where bisection of the uterus was done the patients died of infection in a few days. I have a record of one case where within six weeks after hysterectomy the pelvis was filled with a sarcomatous growth. In one of our cases where temporary recovery took place Dr. Osler saw her six months afterward and there were metastases in one lung and in the mediastinal glands. She soon died. From the histologic standpoint it is most interesting to follow the sarcomatous changes in myomata, but we sometimes have specimens where it is impossible to say absolutely whether a given area is really sarcomatous or merely a suspicious but benign growth. One can not interpret the changes in the muscle cells with the same degree of precision as is possible when considering cell changes in the endometrium. From a systematic examination of the uterine mucosa we have found in nearly all cases where the tubes and ovaries are normal that it is unaltered. The changes that do occur in the endometrium are dependent almost entirely on the situation of the growth. If it be partially submucous the mucous membrane over its most prominent part will be thinned out more and more until eventually it is represented by nothing but a layer of epithelium. This, after a time, is flattened and disappears. In the depressions between the myomata there is often slight gland hypertrophy or polypi develop. Knowing that the endometrial changes are almost entirely mechanical in nature where normal tubes and ovaries exist, we can open up the uterine cavity in myomectomy cases when necessary, there being little danger of infection. On the other hand, it is rarely, if ever, advisable to do a myomectomy where the appendages are adherent. Several years ago I operated on a patient suffering from adherent tubes and a myoma in the posterior uterine wall. There was no evidence whatever of any recent infection. I made artificial extremities for both tubes and then did a myomectomy. Shortly afterward the patient's temperature rose and she developed definite signs of sepsis. Although we reopened the abdomen and drained thoroughly she died of sepsis a month afterward. In this case some old infection evidently lurked in the tubes and readily extended to the uterine walls at the site of the myoma enucleation. I would strongly advise against myomectomy in any case where the appendages are adherent.

A CASE OF ACUTE DISSEMINATED ENCEPHALOMYELITIS,

PRESENTING THE CLINICAL PICTURE OF MULTIPLE SCLEROSIS.

JOSEPH L. MILLER, M.D.

CHICAGO.

Acute disseminated encephalomyelitis manifests itself in one of two clinical types, viz.: As an acute ataxia or acute paraplegia. The ataxia type is often described as acute ataxia, or better, acute central ataxia, the latter term serving to differentiate it from the ataxia resulting from peripheral nerve changes.

Eisenman in 1863 described a case of post-typhoid ataxia as a result of myelitis.[1] Leyden in 1868 reported a case following trauma. Westphal in 1872 reported several cases following variola and typhoid, and was the first to verify his diagnosis by autopsy. Ebstein at the same time reported a case of speech and co-ordination disturbance following typhoid, and eight years later reported the autopsy findings on the same case. Pollard in 1872, under the title, "Case of Locomotor Ataxia, Beginning Suddenly and Disappearing Under Treatment," described what was probably a case of myelitis. During the past thirty years numerous cases have been reported which, with the pathologic investigation, have verified the findings of the earlier writers.

NARRATION OF CASE.

This patient entered Cook County Hospital in July, 1902, in the service of Dr. Dolamore, through whose courtesy I am permitted to report the case.

History.—Patient was 47 years old, laborer. Family history was negative. He had been a moderate drinker during the past ten years; previous to that he drank excessively; he chews and smokes tobacco. He had syphilis twenty years ago and was treated at irregular intervals for several years. Six years ago, as the result of a trauma, he sustained a fracture of the right femur. Three years ago the patient was in Cook County Hospital with croupous *pneumonia;* during the course of the disease he suddenly developed an aphasia, which was only complete for a few days, rapidly improving. Whether there was an involvement of the legs at the same time the patient does not know and no record of it was made at the time. A few days later the patient made his first attempt to walk, and found that he staggered like a drunken man. Slight disturbance of speech has persisted since, particularly manifested in a slowness and monotone with inability to make himself understood when excited. The difficulty in walking varies with periods of marked improvement followed by relapses. There has never been any bladder or rectal symptoms. Sexual power is lessened, but eyesight is unimpaired. There is no gastric disturbance. His memory is good. He is more emotional during the past three years.

Examination.—The patient is well nourished and his color is good. The feet are widely separated in walking; toes abducted, heels striking the floor first. Muscular strength in all groups of muscles of both upper and lower extremities is good. There is no marked atrophy. Touch, pain and temperature sense are normal. There is marked swaying when the patient stands with his feet together, which is increased by his closing his eyes. There is no ataxia of the legs when lying down and very slight inco-ordination of the arms. There is slight tremor of the hands when at rest, increased by intended movement; very marked intention tremor in legs; none of head. The pupils are equal, reacting to light and accommodation, with marked horizontal nystagmus, no optic atrophy. Skin reflexes are present; knee jerk is slightly under normal. The patient speaks slowly and in a monotone, no distinct scanning. The hearing in the left ear is slightly impaired.

ETIOLOGY.

The vast majority of the cases of disseminated myelitis develop during or following the acute infectious diseases, especially variola and typhoid, less frequently whooping cough, erysipelas, dysentery, measles, influenza, malaria, tuberculosis and gonorrhea. Several cases are reported following exposure to wet, cold or severe fatigue. Leyden reports a case two weeks after fracture of the arm, Taylor after injury received in alighting from a train. A definite etiologic factor was not apparent in many cases.

Experimentally, Babinski has produced both transverse and disseminated myelitis by injection of *Bacillus pyocyaneus,* Roux and Yersin with *B. diphtheriæ,* Rogers with streptococcus. Eisenlohr found staphylococci in the cord in a case following typhoid. Banir found staphylococci following gonorrhea.

PATHOLOGY.

Westphal examined two cases of the paraplegic type, and found multiple areas of necrosis in the cord. Ebstein's case showed gray foci in the cord and medulla. Examinations of recent cases show perivascular inflammation in the cord, medulla, pons and cerebrum—in the latter in both gray and white matter. The nerve fibers are destroyed, the neuroglia increased.

SYMPTOMOLOGY.

Clinically, the disease manifests itself as an acute ataxia or paraplegia. The characteristic symptoms of the ataxia form given by Westphal were: 1, Slow or scanning speech; 2, ataxia with normal or slightly lessened muscular strength; 3, no sensory disturbances; 4, often psychic disturbances.

The ataxia is often more marked in the upper extremities, or it may be present in the form of a hemi-ataxia. Ebstein's patient could move his legs in bed without difficulty, but was unable to walk. Unconsciousness may mark the onset, the ataxia only appearing later as in Lenhartz's case; anesthesia and sphincter paralysis marked the onset, the ataxia appearing two weeks later. Intention tremor of the head and extremities is usually present. Nystagmus is an infrequent symptom. Speech disturbances are almost always present, varying from complete aphasia to slight slowing or monotone. Slight if any superficial or deep sensory disturbances are present. In Lenhartz's case the anesthesia present at the onset disappeared in two weeks. Sphincters were, as a rule, intact. Ptosis was present in Pollard's case. Optic neuritis has been occasionally noted. Skin reflexes usually unchanged. Tendon reflexes often exaggerated.

The paraplegic type is characterized by a flaccid paralysis, with loss of knee jerk, sphincter involvement and often sensory and trophic disturbances.

The course is: 1, Early complete recovery; 2, partial recovery, with perhaps only one symptom remaining, as the speech disturbance; 3, periods of improvement with relapses, the condition being progressive. Ebstein's case showed slight improvement in the beginning, followed by gradual progression, the ataxia reaching such a grade that the patient was confined to his bed during the last two years. Westphal believed that many cases reported as recovered would later relapse. Early fatal termination is unusual.

RELATION TO MULTIPLE SCLEROSIS.

The clinical picture in many of these cases, including the writer's, is one of multiple sclerosis. Leyden formerly maintained that the absence of progression differentiated it from this condition; this has not, however been supported by clinical facts, as in Ebstein's case quoted above. Instead of an acute process with healing and permanent defects, the acute onset would appear to mark the beginning of a chronic process, which may become latent, but more frequently tends to advance. Pathologists are agreed that the anatomic findings may be identical with those of multiple sclerosis. The clinical symptoms complete the picture, and it would be preferable, as is insisted on by many writers, to consider these cases of multiple sclerosis with acute onset.

TREATMENT.

In the early stages, rest in bed, with special attention to the skin to prevent bed sores, is essential. Cold may be applied along the spine, without, however, much hope of benefit. Later, the use of massage and electricity is of value. The systematic exercises employed in tabes are of value in lessening the ataxia. Freedom from exposure to cold and over-fatigue may prevent acute exacerbation. The long list of drugs which are reported as curative is evidence that spontaneous recovery, or at least improvement, is not unusual.

100 State Street.

DRAINAGE, SEWERAGE AND WATER SUPPLY OF NEW ORLEANS.*

GEORGE G. EARL.
General Superintendent of the Sewage and Water Board.
NEW ORLEANS.

In undertaking to give you a brief account of what has been done, or is contemplated, in the direction of the draining and sewering of New Orleans, as well as in the matter of a water supply for her 300,000 thirsty citizens, I understand that I am undertaking a task which will require a most direct method of treatment, to be kept within bounds as to time, and will, therefore, without circumlocution or delay plunge at once into my subject.

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* *Read at the Fifty-fourth* Annual Session of the American Medical Association, in the Section on Hygiene and Sanitary Science, and approved for publication by the Executive Committee: Drs. S. Fulton, Seneca Egbert and H. M. Bracken.

A map of southern Louisiana will show that New Orleans was begotten, geologically, geographically and commercially by the Mississippi river, which, beside being the Father of Waters, and of New Orleans, is the father as well of a very large area of assorted swamps and fertile alluvial lands known as the Mississippi delta.

Just to the north of New Orleans lies Lake Pontchartrain, which is twenty-five miles wide and forty miles long. North of Lake Pontchartrain are nearly level plains covered by pine forests which rise very gradually as one leaves the lake shore. These are not of any recent alluvial formation, and several of the small rivers draining this area command the only local water sheds which New Orleans could consider as possible sources for a water supply which would yield a soft water, free from the great amount of silt which the Mississippi river always carries. I will have occasion later to speak a little more fully in regard to them.

All the land remaining in southeast Louisiana, east, south and for eighty miles west from New Orleans, is the creation of the Mississippi river. A hundred miles of original gulf front has been advanced eighty miles into the gulf by its deposits. For centuries the river has been scouring half of the continent for material to this end, and no year has passed that it did not, in annual overflows, contribute vast accumulations of silt. Through many outlets, all with shifting channels, it poured its muddy waters, cutting here and building there, according to its whim, but building always until every outlet was in truth a river on a hill. No natural drainage anywhere in the area finds its way into the Mississippi river, but rather seeks the gulf through the swamps behind, the surface of the river, even at low water, being about level with the low lands lying but a short distance from its banks, and at high water so far above even the natural banks which its waters have built, that in order to inhabit and cultivate their fertile fields and protect them from further overflow, artificial embankments, or levees, ranging from a few feet high at the lower end of the river to as much as twenty-five feet in places higher up, have had to be constructed. The lands thus reclaimed are immensely productive and repay many times the cost of their reclamation, and even compensate, in the long run, for the occasional disasters which follow broken levees and the inundation of large areas with the consequent loss of crops and great damage to existing improvements.

These lands, for an indefinite depth, are river silt; a stone even as large as a pea could not be found in a whole parish. They vary from a heavy, sticky, plastic clay to sand of various grades, the clay predominating; while at gulf level the lands have often been covered by vast cypress forests, many of which still remain, while others have vanished and been covered by silt from subsequent overflows, resulting in strata of stumps (some of which excavations reveal in a distressingly good state of preservation) and in other strata of rootlets and vegetable fiber very nearly resembling peat, but often mixed with clay. All of this soil is saturated, though so close grained as to part with its water most slowly and reluctantly. At New Orleans a hole, say four feet in diameter and two or three feet deep, will usually show water at its bottom, but on sinking the hole deeper the water will be taken out with the excavation and without pumping, and it will require often several days before enough water will seep into the hole to fill it to the level at which water originally stood.

In making excavations no picking to loosen the earth is required; a shovel enters easily, but in the predominating clay it takes a strong man to raise a shovelful, and to cast the dirt from the shovel is usually impossible as it sticks with remarkable tenacity.

Such a saturated, plastic soil as just described has only a very limited bearing power; overload it and down goes your structure. It partakes, in a limited sense, of the nature of a thick fluid, transmitting pressures and vibrations somewhat as a fluid transmits them, and making foundations for heavy structures as well as excavations of great depth both difficult and expensive.

Your attention is now invited to a map (No. 1) of New Orleans (the city limits really cover considerably more territory than is shown, but the remainder need not be considered).

Within the area shown by this map there are some 900 miles of streets. Over 600 miles of these are really open, and about 400 miles are in the well-built or rapidly-building area. The total area covered by the map and within the city limits is about 20,000 acres, or thirty-one square miles, sufficient easily to accommodate 1,200,000 people. The top of the map is north. Near the bottom of the map is the Mississippi river, which nearly boxes the compass in passing New Orleans, running in every direction save west, and rendering the question of "where is north" hopeless to strangers and difficult to the dwellers on its banks. At low stages of its waters the river surface rises and falls with the irregular gulf tides, and despite the fact that its minimum discharge is seldom less than 200,000 cubic feet per second, and its distance to the gulf about 100 miles, we often find its surface at New Orleans practically at gulf level.

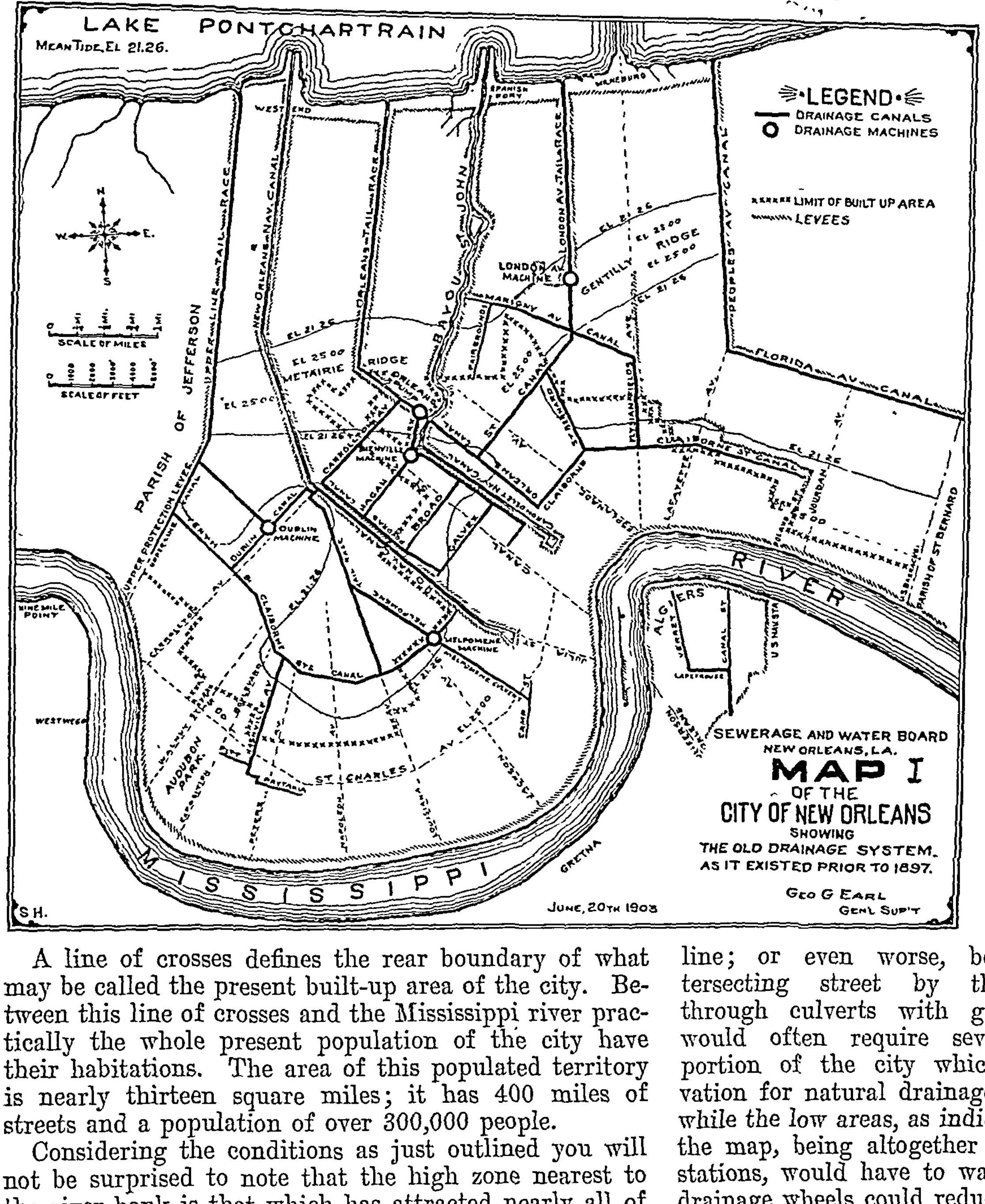
At extreme high water the minimum discharge is multiplied by ten, the velocity is enormous, and the surface of the seething yellow waters stands twenty feet above gulf level, and as much above over half of the area shown on this map.

The northern boundary of the city is Lake Pontchartrain, which is really a shallow arm of the Gulf of Mexico, slightly brackish and affected by gulf tides which have a fluctuation of only a few inches daily, but under the influence of the winds have an extreme range of nearly six feet, from two feet below to four feet above mean gulf level. Lake Pontchartrain is a beautiful sheet of water. Several pleasure resorts lie on its shore within the city limits, and the navigation of its waters for both business and pleasure forms an important part of the life of New Orleans. Leading from the lake into the city are two navigation canals in which, also, the water stands at gulf level; at high lake tides their water surface is as much as five feet above portions of the city through which they pass, levees only preventing overflow.

Between the river and the lake, and about two miles back from the lake shore, is a narrow area, one-fourth of a mile wide, crossing the city, marked Metairie ridge and Gentilly ridge. This ridge is the handiwork of an old bayou which at one time traversed it, and which, by the overflow of, and deposit from, its silt-laden waters, erected this barrier, just high enough to prevent high lake tides from flooding the area to the south of it.

This ridge and a strip averaging about a mile in width on the immediate bank of the river, make up the only area which really has a natural drainage. It covers 5,000 acres, or about eight square miles. Even this area averages only about nine feet below mean gulf level and ten feet below the high-water mark of the river. On either side of Metairie ridge, sloping away for a short distance, the land is between mean and high gulf level (as far as the fine black lines on the map marked "elevation, 21.26"). To the north of this the land lies at or below mean gulf level, and is mostly unreclaimed swamp, as marked on Map IV. This area is about 5,000 acres, and for the present, in sewerage and water calculations, *it can be ignored.*

South of Metairie ridge we have nearly 15,000 acres, or twenty-three square miles of area; of this, 6,000 acres, or about nine square miles, lie at or slightly below mean gulf level. Under natural conditions, this would be always flooded. Four thousand acres, or about six square miles, lie above mean lake level but below the high-water mark in the lake, and this would also, under natural conditions, be flooded whenever an extremely high-water occurred in the lake.



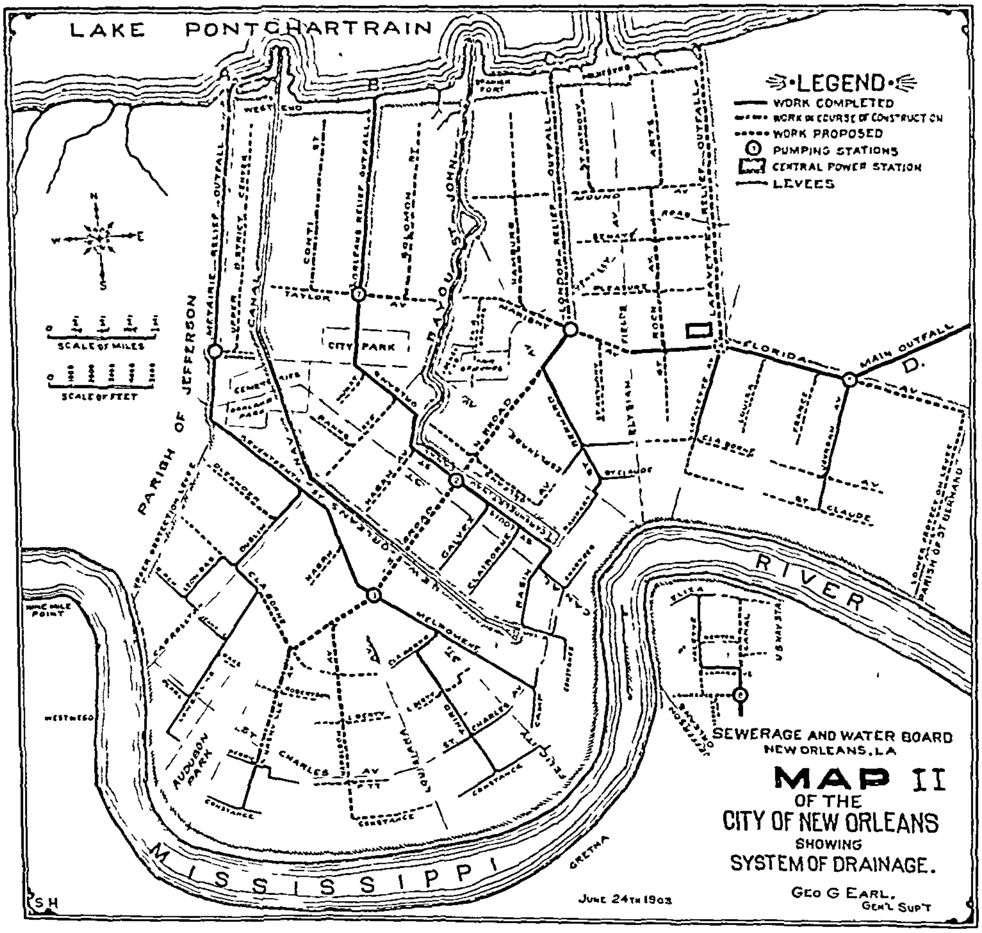
A line of crosses defines the rear boundary of what may be called the present built-up area of the city. Between this line of crosses and the Mississippi river practically the whole present population of the city have their habitations. The area of this populated territory is nearly thirteen square miles; it has 400 miles of streets and a population of over 300,000 people.

Considering the conditions as just outlined you will not be surprised to note that the high zone nearest to the river bank is that which has attracted nearly all of the population, and that the remainder is either on the intermediate, or else concentrated within lower areas in which artificial drainage has been most effective. The heavy black lines on this map show the only main drainage arteries which existed prior to 1892, and the black circles the pumping stations which had to lift all of the drainage which came to them from their river, or low side, into leveed outfall canals, *sufficiently* above lake level, on their lake side, to cause a discharge into the lake. These pumping stations were nothing more nor less than *great undershot water* wheels which were worked backward by steam engines, and paddled the water which came to them forward and upward.

The canals from which and into which these wheels pumped were practically level, shallow earth canals, and the vertical distance through which the wheels could lift was very small. The capacity of the wheels was insignificant in proportion to the vast amount of drainage which they had to handle, and the canal system, as you will notice, was confined to the low areas, the natural slope of the ground from the river to these low areas being depended on to deliver storm water to the canals through open gutters on every street leading from the river directly back to them.

So far as the populated area of the city was concerned, this system of storm water drainage was purely a surface system with open gutters, broad, flat and deep, on every street perpendicular to the river and crossing every intersecting street by surface culverts. Into *these gutters liquid household* wastes had to be discharged, and in dry weather such wastes were insufficient to cause a current, so that what was practically sewage (since it contained every element of sewage save water closet discharge) lined every street in stagnant pools. With great rainfalls, which are frequent in New Orleans, the waters from the upper end of each street, moving down from the steeper grades along the river front, soon overtook that which was collected where the slope begins to flatten out and the accumulated flow would speedily fill each street from curb to curb, and often from property line to property line; or even worse, being checked at each intersecting street by the necessity *for* passing through culverts with greatly restricted areas. It would often require several hours for even that portion of the city which really has sufficient elevation for natural drainage to be freed from overflow, while the low areas, as indicated by the vertical lines on the map, being altogether dependent on the pumping stations, would have to wait as many days before the drainage wheels could reduce the general water level to a point that would expose their natural surface and bring the water within the banks of the canals, as shown on the map.

It might be of interest to note that on the day when the people of New Orleans had to vote on the question of a bond issue for sewerage, water and drainage construction, Jupiter Pluvius, who appears here to be chronically unpropitiated, arranged matters so that rafts, boats, hipboots and hacks were the order of the day. The vicious temper of the potentate above named toward New Orleans has been continually exhibited in acts both of commission and omission. The city gets at his hands an average of sixty inches of rainfall per annum; more than any other large city in the United States, and a great proportion of this unusual total rainfall he crowds into special seasons, days and hours with unprecedented rates; like a half-inch in three minutes, or one inch in ten minutes, or three inches in an hour, or eight inches in six hours; while at other seasons for weeks and even months he permits the dust to blow in our faces and accumulate on our roofs, and allows 60,000 elevated tanks of cypress wood (cisterns collecting roof water) on which the city depends almost exclusively for her water supply, to go dry and shrink until their open cracks show daylight through and through.



The partial construction of the drainage system which will be outlined to you with the next map (II) has greatly relieved the situation as to surface drainage, but with regard to sewerage and water supply New Orleans is as she has been for many years. As to sewerage, there is as yet no sewerage system. Fecal matter is deposited in shallow open pits with porous bottoms. Some of these are partially emptied occasionally by sanitary excavating companies who transport their contents in barrels to a point below the city limits and dump it into the river. Immediately after cleaning, these vaults are particularly offensive. In ordinary operation they appear to resemble the modern septic tank, and so long as they do not receive the greatly diluted flow which water closets yield they are not really bad and very rarely overflow. When, however, water closets are connected either to these vaults or to cesspools sunk deeper into an already saturated soil, then trouble begins and constant emptying at considerable cost discourages the owner, who finally constructs shallow drains near the surface, into the surrounding soil, or in a more direct, though unlawful, way allows overflow into an open gutter.

All kitchen, laundry, bath and other liquid household wastes go direct to surface gutters through flat and shallow alley gutters or pipe lines, and are what render the New Orleans gutter the reproach which it is, and which only a sewerage system can relieve.

In the matter of a water supply, the only other system than cisterns now serving in that capacity was constructed in 1836 and has been from time to time extended until it now covers some 125 miles of streets. The supply is taken from the Mississippi river, and without any purification whatever is delivered directly to the consumer. On an average the Mississippi river contains over two and one-half tons of mud for every million gallons of water. Unpurified, it is unfit for almost any use except lawn sprinkling, and between its comparative uselessness and its rather excessive cost it has gained but small patronage, having only about 5,000 premises connected with it. To be fair to the waterworks company, however, it should be said that the small number of consumers, and the large waste, by the city especially, has compelled the high rates, while the problem of an economical purification of a water of this character is one which has not been at all certain of solution until within a very few years past. The waterworks company made an effort at filtration in 1892 which proved an expensive failure, and thereafter (possibly quite naturally) claimed that the burden of proof as to an economical and successful method remained with those who still urged such purification on them.

In 1892 a franchise was granted to a private company for the construction and operation of a sewerage system, and a year of two afterward arrangements looking toward the drawing of plans and raising of money for drainage construction were inaugurated by the city. Mr. L. W. Brown was then city engineer, and was largely instrumental in getting work on drainage plans started. A strong advisory board of engineers was appointed, consisting of Mr. Rudolph Hering of New York and Messrs. B. M. Harrod and H. B. Richardson of New Orleans. Along lines suggested by this advisory board, and under Mr. Brown's supervision, surveys and investigations were made and eventually a general plan for drainage was recommended and adopted. Map II shows this drainage plan. Its construction has been about half completed at a cost of about $4,500,000.

The central power station is shown by a black hollow rectangle on the map. It contains eleven boilers and seven engines and each engine is connected with an electric generator. The combined capacity of these generators is 5,700 horsepower at the central station switch board, where the electric current destined for the operation of the several pumping stations is controlled.

From this switch board at the central power station lines carry wires to six different pumping stations called respectively No. 1, No. 2, No. 5, No. 6 and No. 7, shown on map by hollow black circles with designating number enclosed. At each of these pumping stations large motors are directly connected with immense centrifugal or screw pumps (depending on the lift required) and are operated as occasion requires by the electricity generated at the central power station.

As now operated, except for the common source of power, there are four separate and distinct drainage systems serving as many districts of the city and finding outlets at points marked on map respectively A, B, C and D, the first three outlets being into Lake Pontchartrain and the last into Bayou Bienvenue, which leads to Lake Borgne, some ten miles east of New Orleans.

The general scheme of operation is the same in each of these systems, and a brief description of the system having its outlet at "B" will give the method of operation of the other systems as well.

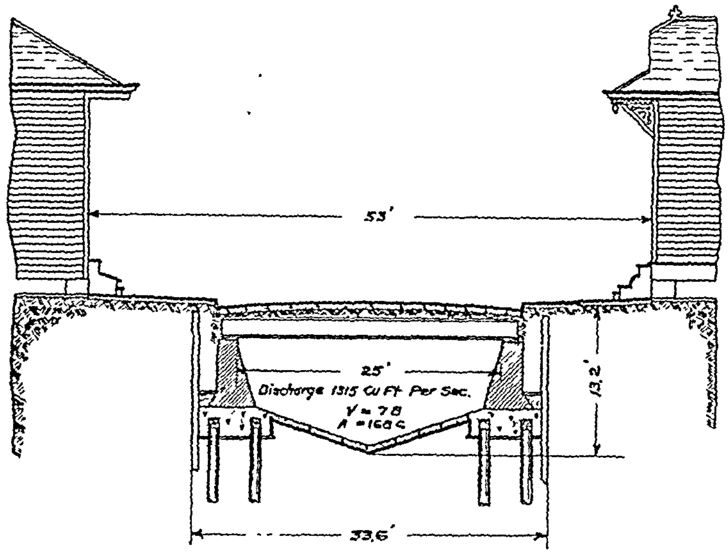


Figure 1.

Starting from the higher area along the river front, storm water flows down the gutters or drains of each street until it reaches the first line of collecting canals which run at right angles to and across the lines of natural drainage and intercept all of the flow which comes to them; further along similar intercepting canals collect the drainage from other areas. These intercepting canals are very shallow and small at their beginnings, but increase in size as their length increases; the necessity for slope to produce flow requires them to increase in depth also, since, in the direction in which they run, the ground is level; being short, however, they are not usually more than about ten feet deep at their junction with the main canals, which latter canals, due to the flow thus accumulated, can carry much larger quantities of water in proportion to their area and at lower rates of fall.

The result of this is that where a great many small gutters running directly to an intercepting canal a mile back from the river front would be overcharged and flood all of the streets through which they passed, the single large channel, properly lined and having the same slope, though far less area of cross section than the combined gutter areas, easily delivers the flow which reaches it to a pumping station much farther back from the river bank.

The St. Louis street covered and lined canal, which terminates at pumping station No. 2 and serves an area of about 1,200 acres, has a capacity to deliver to that pumping station 1,200 cubic feet of water per second. It has a flat top, is twenty-five feet wide, six feet high at side and eight feet at center, with "V"-shaped bottom.

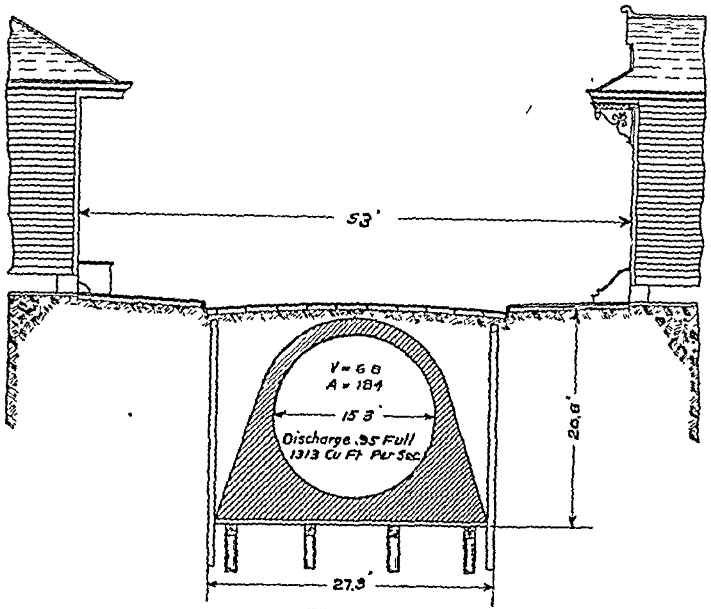


Figure 2.

A cross section herewith presented (Fig. 1) shows the construction of this particular canal, and alongside of it a circular sewer fifteen and three-tenths feet in diameter of equal discharging capacity (Fig. 2). You will notice that the canal section as adopted for New Orleans does not require nearly so deep an excavation as the circular section, depth being an important element, both of first cost and cost of operation where deep trenching is expensive and every foot of fall gained by such depth adds a foot of lift later to be made by pumping.

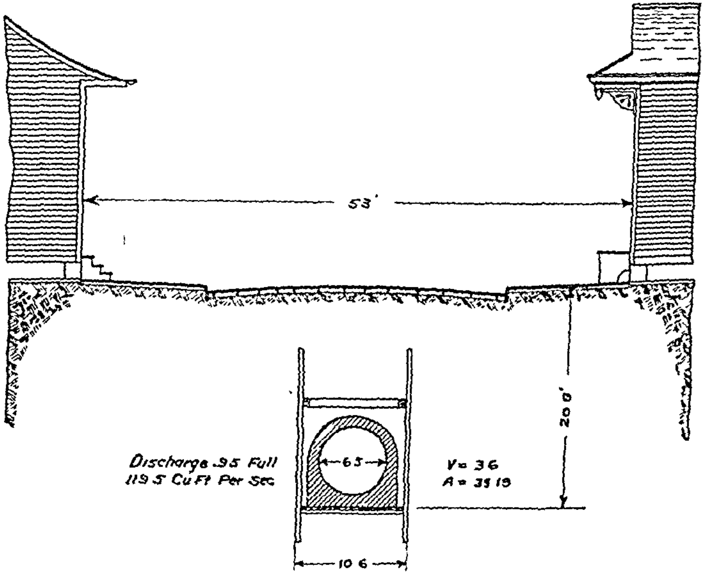


Figure 3.

A third, much smaller circular section (Fig. 3) represents a circular sewer, six and one-half feet in diameter, whose carrying capacity, with the same slope, is found adequate to serve the needs of an area of similar size, density of population and surface conditions, in Chicago, as that served by the St. Louis street canal in New Orleans.

The great difference in size, and very much greater difference in carrying capacity in the St. Louis street canal, 10 to 1 as compared with the smaller circular section, represents an immense difference in cost, and is necessitated by the vastly greater rate of rainfall to which New Orleans is subject.

At station No. 2 an artificial outlet for the St. Louis street canal is created by pumping the water which it delivers to that station into the canal on the lake side of it. For the present, two screw pumps having a capacity to lift 250 cubic feet of water per second through a vertical distance of five feet are installed at this station. Future installations, according to the original plan, will raise the pumping capacity to serve this area to over 1,200 cubic feet per second, the 500 cubic feet capacity now existing has already been overcharged, though only part of the area is as yet paved, with a great percentage of impervious surface and adequately served with such local drains as must ultimately exist in order to give prompt and satisfactory delivery of the surface waters from each separate locality into the drainage canals. Improvement in these conditions can only come slowly with the development of the city, with perfected street pavement, etc., all of which tend to bring larger maximum rates of flow into the various parts of the main drainage system.

Having been lifted five feet at station No. 2, the water is carried by an open and unlined canal through a sparsely built area to station No. 7. In order to carry the required quantity of water and still maintain the surface of water in this open canal at a level that will admit of the inflow of the drainage from the area through which the canal passes, pumps at station No. 7 must remove the water which comes to them as fast as it comes and discharge it into the outfall canal on the lake side of the said station; beyond this point no further aid from pumping is available, and the pumps at station No. 7 must be able to completely empty the canals which drain to them into the lake level outfall canal which leads from them, i. e., to make a lift at times of as much as sixteen feet, although the greater part of the volume of water which they raise is not lifted nearly so far.

The present discharge of all storm water into Lake Pontchartrain is a temporary measure; the final plan of drainage, when completed, will divert all of the constant flow, and flow from even moderate storms, into Bayou Bienvenue and thence to Lake Borgne, ten miles east of New Orleans, where the deposit of street washings carried by the drainage system can do no harm.

This very desirable result will be accomplished by a series of canals joining pumping stations 1, 2, 3 and 5; said stations then, under ordinary conditions, will operate as follows:

All waters reaching station No. 1 will be raised into a canal leading to No. 2; all waters reaching No. 2 will be raised again into a canal leading to No. 3, etc., until station No. 5 is reached, when a much higher lift will be made into a level outfall canal, at gulf level, leading to Lake Borgne via Bayou Bienvenue.

Such a series of canals and pumping stations, in order to dispose of the future maximum run off from occasional excessive storms, would have to be of large proportions, and a careful study of the situation finally resulted in a recommendation that provision for about three-eighths of the maximum future run off be made toward Lake Borgne while the remaining five-eighths would be sent through relief canals into Lake Pontchartrain. Only two or three storms a year, possibly, would then find a partial outlet into Lake Pontchartrain, and the relative total amount of water and street washing so discharged would be of no practical effect, while the saving in cost both of construction and operation by such a disposal of occasional surplus waters was a very large amount. For the present the city is unable to undertake the Lake Borgne outlet, and all drainage is through the relief canals into Lake Pontchartrain, as above outlined.

The drainage pumps may be divided into two classes: Those which pump into outfall canals, thus making final disposal of the water which they pump, and those which make intermediate lifts delivering their discharge toward the final disposal stations.

The adopted plan of drainage, as outlined in the 1895 report, calls for an ultimate equipment of final disposal pumps that will have a discharging capacity of over 8,000 cubic feet per second; the present installation of pumps of this class amounts to 2,600 cubic feet per second, nominal capacity (the actual capacity is somewhat greater because the pumps are not called on to throw their maximum capacity and make their maximum lift at the same time, and can throw somewhat more than their rated capacity when working under lower heads).

In the matter of intermediate lift pumps, about 10,000 cubic feet per second capacity is the maximum ultimate requirement, and the present installation has only a capacity of about 1,100 cubic feet.

An adequate idea of present and future total pumping capacity as above outlined may be obtained if you will conceive that the water from all the pumps is frozen in the form of one continuous prism ten feet square as it leaves them; the present discharge would give you nearly half a mile of such prism every minute, while the ultimate rate of discharge would construct your prism at a rate of over two miles per minute.

The proposed drainage system will have about sixty miles of canals. Into these canals storm water from about 700 miles of streets south of Metairie ridge must be delivered. Proper readjustments of gutter grades and laying of subdrain pipe and street paving will eventually perfect this essential feature of improvement, but this development will be tedious and expensive, and can not cover fully every inhabited portion of the city for years to come; even if it could the drainage system of New Orleans could not properly receive the dry weather flow of house sewage for the following reasons:

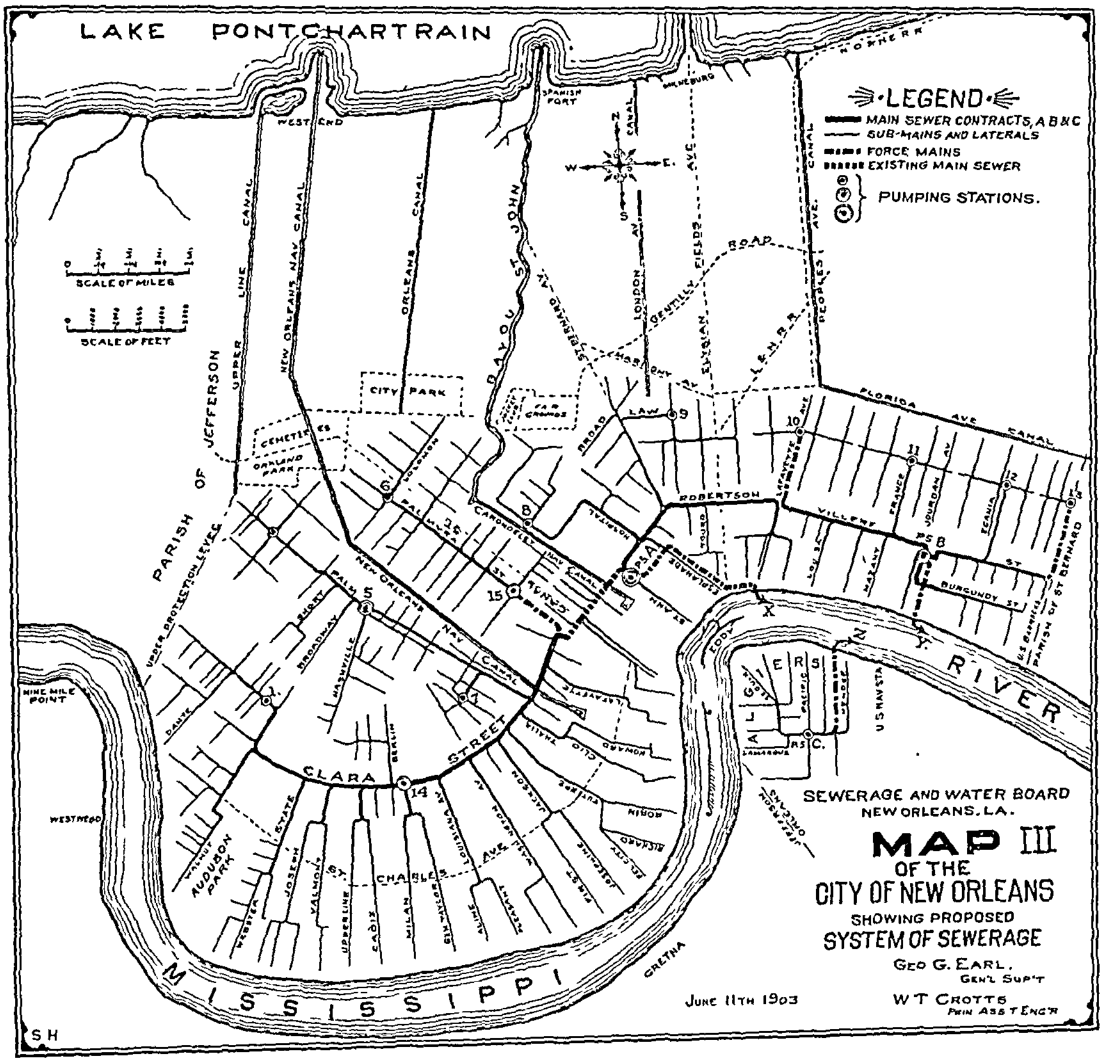
First, the subdrainage arteries would be too shallow to afford a proper fall for house connections to enter them, and must themselves be so large and flat that the small stream of fouled liquid wastes could not be successfully carried in them, but would form deposits and putrefy.

Second, the outfall canals of the drainage system would, in dry weather, be converted into elongated open cesspools of the most objectionable type.

For these reasons the sewerage of New Orleans is a separate problem and because it must deal with the fouled water originating from the water supply, and passing away as domestic wastes the two problems have certain vital points in common. There is no possible source available for a gravity water supply, and no possible point for a natural gravity sewage outlet; therefore, pumping must be resorted to for each, and all costs, both of construction and operation, hinge on the question of "how much water per capita shall be assumed in designing the systems."

The average water consumption has been assumed at 100 gallons per capita per day, and the water distribution system has been designed on this basis, making due allowance for the usual fluctuations of demand incident to the needs of the community, including a fair allowance for fire extinguishment. The next common question is area of territory to be served and density of population on that area. We have drawn both water and sewerage plans to serve the twenty-three square miles of area south of Metairie ridge when said area shall contain 850,000 people. At present thirteen square miles of this area contain about 300,000 people, and the remainder is mostly open. Present construction in both sewerage and water-works systems will only cover the well-populated area.

Turning now to Map III, I will very briefly describe the sewerage system as now proposed. I should say, first, that the private company which undertook a sewerage franchise in 1892, after spending nearly $300,000 on plans and construction, went into the hands of a receiver, and its works and rights were finally purchased by the city in 1902.



SEWERAGE AND WATER BOARD
NEW ORLEANS, LA.
MAP III
OF THE
CITY OF NEW ORLEANS
SHOWING PROPOSED
SYSTEM OF SEWERAGE
Geo G. Earl, Gen'l Sup't
W T Crotts, Prin Ass't Eng'r
June 11th 1903

A sewerage plan naturally centers about and depends on the available point for outfall, or disposal of sewage. For New Orleans, beyond any possible doubt, the Mississippi river is the proper point for disposal. By a discharge of sewage, below its surface, into its direct current, almost infinite dilution is accomplished and, provided your point of discharge is not into, or above the eddy, you have also instant and continuous removal.

The map shown indicates the lowest considerable eddy existing in the river at New Orleans, and any convenient point below this eddy, on either bank of the river, will receive and effectually remove the sewage of the city. Points on this map marked "X," "Y" and "Z" are the points at which the sewage will be discharged into the river, and points marked "A," "B" and "C" show locations of the pumping stations at which the centrifugal pumps will drive the sewage into castiron force mains leading uphill to the river. The maximum lift which any of these pumps will make will be fifty-five feet.

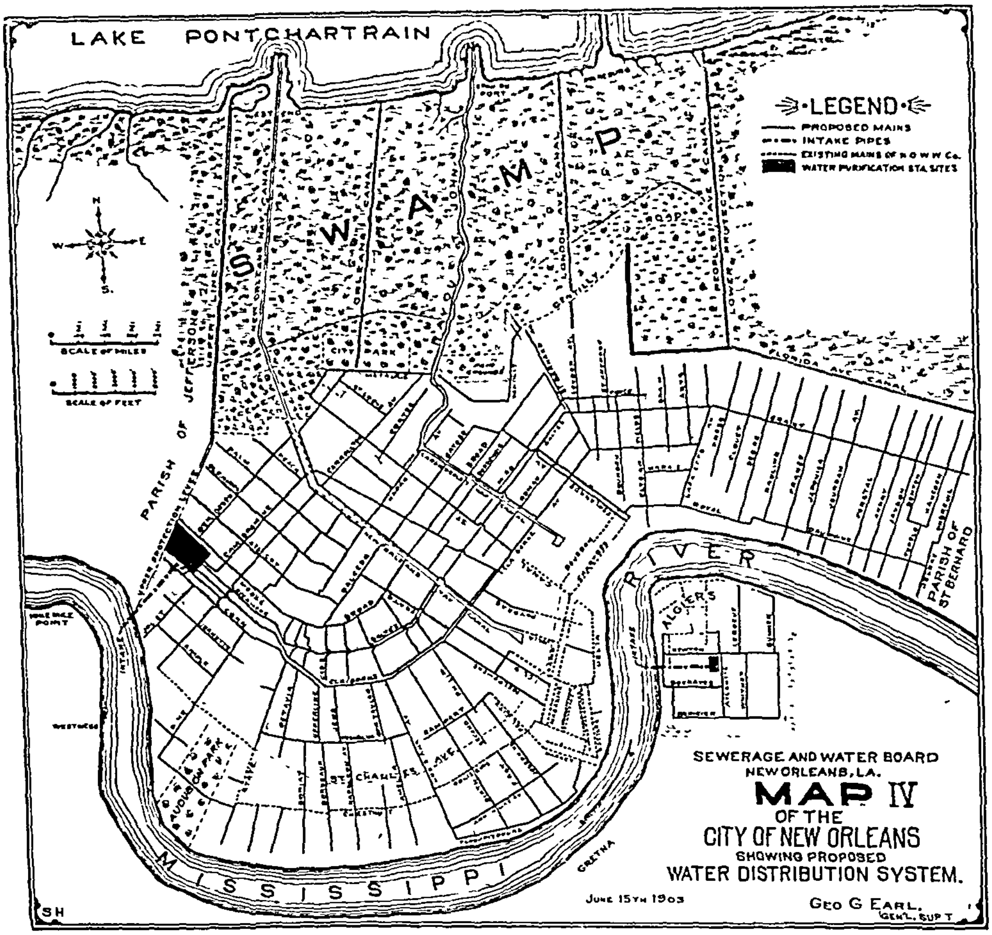
At station A, where most of the sewage will be collected, the pumps will be operated by steam power and there will be located there also electric generators that will furnish the power to run all of the other pumping stations required for intermediate sewage lifts in the system on the east bank of the river and indicated by circles on the map, numbered from 1 to 15, inclusive. These intermediate lift stations will be connected with station "A" by wire lines laid under ground as the sewers are laid, and will be very small affairs; merely wells into the bottom of which a low level sewer will enter, and in which motor-driven centrifugal pumps, arranged to stop and start automatically with the rise and fall of the sewage in the well which they occupy, will lift the sewage some eight or ten feet and discharge it into another sewer at a higher elevation.

The proper location of these pumping stations, and the most advantageous and economical arrangement of the collection system leading to them, is the whole secret of sewer design for New Orleans. Years of study have developed the system as outlined on the map shown; every available foot of natural fall is used to the utmost, and the principle of concentration of flow as outlined in connection with the drainage plan is applied with immense advantage.

The map before you only gives the main lines into which the flow from the local areas is concentrated.

As designed, 87 per cent. of the total mileage of sewers will be eight-inch laterals laid with a fall of one foot in 300 feet, with their tops nowhere less than five feet below the surface and seldom more than nine feet below the surface. At each dead end (i.e., the head of each lateral sewer) an automatic flush tank will be placed, which will be gradually filled with clear water from the water-works system, and once every twenty-four hours will discharge all at once some 250 gallons of water, thus creating a cleansing current at the extreme upper end of each lateral sewer. Beside the sewage proper and the flow from flush tanks the sewers will also receive a considerable amount of ground, or seepage water which, no matter how carefully the joints are made, will find its way into them. In calculating the size of the sewers we have estimated that about one-third of the annual rainfall will gradually sink into the soil and run off through the sewers as a constant ground water flow. The under-drainage of the soil thus obtained will be of advantage from every point of view, decreasing the saturation of the soil and guaranteeing, even during the early life of the sewers, a sufficient volume of flow to procure good velocities.

The system as designed, when working at its full capacity, or even when the sewers are half full, will carry sewage at gradually increasing velocities, ranging from two to three and one-half feet per second, from the most distant portions of the system to the final disposal pumping stations. Every pumping station will create, continually, an artificial low outlet for all of the sewers draining to it, and the flow in the sewers themselves will be only due to their fall, and as certain as the laws of gravity which hold, even for New Orleans. The very longest line of travel from point of origin to river outlet will be 7.8 miles, and this distance will be covered in less than five hours, before putrefactive changes have had time to manifest themselves, in channels which are smooth, clean, well ventilated and designed exactly to perform most efficiently the one particular object of sewage removal.



The question of a water supply begins naturally at its source. For New Orleans there is simply no possible gravity source of supply. Local artesian waters are bad in quality, inadequate in quantity and beyond consideration in the cost of either constructing or operating a system of water supply for a large city.

North of Lake Pontchartrain there are several water sheds, already referred to, which would furnish, or could be developed to furnish, a very desirable water supply of soft and reasonably clear water. Local population on their area and a certain amount of color, of vegetable origin, and of fine silt in suspension would necessitate filtration for any one of these waters, but they would not be difficult to filter. The nearest and cheapest of these projects, however, would require a pipe line forty miles long, mostly through a gulf level marsh. The delivery of forty million gallons per day through a forty-eight inch pipe line for such a project would necessitate the construction and operation of two pumping stations, each capable of lifting water 220 feet to overcome the frictional loss in the level pipe line and deliver the water into a tide level reservoir at New Orleans, after which filtration and pumping for distribution would still be necessary.

The cost of such a forty-mile pipe line and pumping stations to force water to the city would be over $4,000,000, or very nearly all that the city has to spend in waterworks construction, so that nothing would be left to construct filters, pumping station for distribution, or a system of distribution pipe over all of the streets of the city; which last-named works stand ready to consume the whole fund available for water-works construction, and without which an abundant water supply in Africa would be just as valuable an asset to New Orleans as though it were at the city line. Evidently the supply from over the lake is beyond present consideration. There remains, then, only the Mississippi river. Its advantages as a source of supply are manifest. It is at our door and inexhaustible; in many respects it is a most desirable water, being low in bacteria, free from odor and color, and cool and pleasant to the taste and showing practically no evidence of sewage pollution. It is, however, not a soft water, since it contains a fair amount of the carbonates and sulphates of lime and magnesia in solution, and it most certainly is not a clear water, being, on the contrary, at New Orleans, almost always very muddy, and a large proportion of this suspended matter is composed of submicroscopic clay particles which it refuses persistently to part with in any reasonable period of subsidence. It was evident to the author of this paper, when he was elected to his present position in 1900, that the problem of the clarification of Mississippi river water must be solved successfully and economically if the present generation was to see an adequate clear water supply in New Orleans. A careful study of investigations lately made at Louisville and Cincinnati looking to the purification of somewhat similar waters convinced him that a study along the same lines at New Orleans could not fail to point a proper solution, and he, therefore, immediately commenced to urge the necessity for such an investigation.

The advisory board of engineers which was constituted a little later also urged an early investigation in this connection, and the sewerage and water board promptly appropriated the necessary amount of money for its execution. The investigation was carried out under the personal supervision of Mr. Robert Spurr Weston, resident expert, along lines approved by Mr. Geo. W. Fuller of the advisory board of engineers, who had conducted the similar investigations at Louisville and Cincinnati, and resulted in demonstrating an economic and efficient method of purification for Mississippi river water at New Orleans. I understand that Mr. Fuller will present you a paper on water purification, and will leave in his hands any general discussion of this subject, only giving in very hastly outline here a description of the plant which is now being designed to carry out the method of purification which was shown to be most efficient and economical to meet the local requirements.

Map IV shows the proposed pipe distribution system for the delivery of water throughout the city, and at the left-hand side of the plate, along the upper city line, is the proposed location of the pumping and purification plant. Seventy acres of ground will be needed when New Orleans has 1,000,000 of population, and that area will be acquired now. The advantages of the particular location chosen lie in the facts that it takes its water from the river above the city, is near enough to the river to allow of the location of all pumping machinery under one roof, is in proper line and will serve equally well as a purification and distribution station if later it should become advisable to go higher up the river for a supply, or even to bring in water from across Lake Pontchartrain, and that from it better than any other point in the city an economical distribution system, adequate to present needs and extensible to conform with future requirements, can be constructed. The distribution system, both present and future, will have to speak for itself from the map while we trace briefly the outline of the proposed purification and pumping plant.

An intake will be located at the low water shore line of the river, at the upper end of the city. The suction pipe will terminate in this intake, and river water, always taken from near the surface where the turbidity is least, will be admitted into this intake. The suction line from the intake will be a level line nearly a mile long, and laid two feet below the lowest water level in the river. Through this line centrifugal pumps will draw a constant stream of water, containing an average of 650 parts per million of suspended matter and will discharge it at the bottom and the back end of a masonry reservoir ten feet deep and holding about twelve hours' supply for the city; at the other end of this reservoir, from its top, a skimming weir will collect an equal amount of water which will be found to have lost an average of 35 per cent. of its suspended matter by twelve hours of plain subsidence. To this water then a coagulant will be added and, after thorough mixing, the whole will pass into the bottom at the back end of the coagulating reservoirs, where again twelve hours of subsidence will be allowed, after which the effluent of these basins will be skimmed into a collecting conduit leading to the filters. The rate of application of coagulant will be so proportioned that when the water reaches the filters not more than 50 to 75 parts out of the original average of 650 parts per million of suspended matter contained in the river water will be carried over and this last contingent of persistent turbidity will have been so altered in its form that, whereas in its original condition a very slow passage through a thick layer of fine sand would not have removed it, in its present condition even rapid passage through a thin layer of relatively coarse sand will suffice, not only to remove the last trace of it, but to enmesh as well a very high percentage of the bacteria which the water contained. As coagulant, sulphate of alumina will probably be used, an average of about four grains per gallon of water being required.

The filters are merely thin layers of sand underdrained each to a single discharge pipe terminating in an automatic controller by means of which the rate of passage of water through the sand layer is regulated. When the sand layer becomes clogged by the retained suspended matter the filter is cut out of service and cleaned, first by forcing air and then filtered water at a very high rate backward through the sand layer, thus loosening and removing the deposit which is collected by overflow into channels just above the sand layer and drained off into a sewer. Three or 4 per cent. of the water filtered will be required for washing the filters. Beneath the filters will be a small clear water basin from which the water will flow to the pumps which will either force it directly into the mains of the city distribution system, under a pressure of about ninety pounds per square inch, or else raise it into covered clear water reservoirs where it will act as a reserve supply to tide over periods of greater demand when the flow from the filters is insufficient.

A year's operation of the system, just above roughly outlined, during our investigation never once failed to yield continuously a perfectly clear water which satisfied every practical hygienic test for purity, and there is no reason why an intelligent operation of a larger plant should in any degree fall short of equally good results. The process, however, requires a high grade of supervision, if its best results, both in cost and quality, are to be obtained.

The foregoing attempt to cover the three topics of the sewerage, water and drainage of New Orleans in brief descriptive form, within a compass that would really be too short to even treat adequately either project, has necessitated the utmost simplification of even the general subjects, and the passing over of all detail.

These works, to accomplish ends long held to be impossible by many citizens of New Orleans, have really been reduced to such simple and certain general form that their successful operation is now beyond question. All three of the plans are the "boiled down" results of many more pretentious efforts. The simplicity of general features is their greatest strength.

Many details are less simple, but it is probable that further study and the application of experience gained elsewhere up to the time of complete construction will result in a further simplification even of such details. Especially is this true in the water purification plant, which plant, as applied to waters of the character of the Mississippi river water, represents an art whose birth and development is of the last decade, and one in which for some years to come, at least, every effort must bring added evidence for the more positive determination of the large number of variable factors which must be most advantageously combined to produce the best results at the least cost.

We are certain that we can purify Mississippi river water at an additional total cost for purification of not over one and one-half cents per 1,000 gallons. This seems a very modest sum and if quoted at the cost per pint it would sound even better, but a great city uses millions of gallons, and in our case for 40,000,000 gallons of water it amounts to $600 per day for the removal of about 100 tons of mud and 98 per cent. of the bacteria. It is well worth the cost, and more if necessary, but very small items of improvement as they can be developed aggregate immense savings and are, therefore, decidedly worth while.

The total expenditure available for sewerage, water and drainage construction by the end of 1908, when the aim is to have practically completed the sewerage and water system, will have been about $18,500,000.

602 Carondelet Street.

DISCUSSION.

Dr. G. T. Swarts, Providence, R. I.—Is there any underground system at all in New Orleans, or is it all open canals?

Mr. Earl—The drainage system is covered and lined pretty well throughout the populated area of the city. However, that only covers about sixty out of four hundred miles of streets, so that, in effect, all of our sewage at present goes to surface gutters, and eventually gets into the drainage canals which intercept the flow from the surface gutters; there being no sewerage system proper, in any sense of the word.

Dr. Swarts—No pipes, drains or brick sewers under the ground?

Mr. Earl—No, sir; except in individual cases, such as the Charity Hospital and a number of places which have force mains running to the river through which they discharge by pumping.

Dr. Swarts—What about the St. Charles Hotel, for instance?

Mr. Earl—It has a force main and pumps its sewage into the river. So also do a number of the leading hotels, the Charity Hospital and other public buildings.

Dr. Swarts—They build, I suppose, below the proposed intake you mentioned?

Mr. Earl—The proposed water-works intake is at the extreme upper end of the city, and everything that goes into the river is below that intake. You know, we have some fifteen miles of river front.

Dr. Swarts—From an engineering standpoint I would like to ask why the pumping stations are placed so far from the river; why should not the pumping be done at the river?

Mr. Earl—It was a question, first, of the acquisition of the necessary area; we have to get land where it can be reasonably acquired, where it is not much built up. Beside, it fits in better in the matter of distribution. From the point chosen you get the shortest line of transmission to your center of population for your large water mains.[1]

Dr. J. S. Fulton, Baltimore—I remember, six or seven months ago, seeing a sample of the water here. It had been standing for some length of time, but had not yet deposited its milky sediment. Will the proposed plan of filtration exclude that in any way? Will chemical precipitation get rid of that sediment or is there any mechanical way of doing it?

Mr. Earl—The fine particles you speak of can only be gotten out by coagulation. Filtration without coagulation fails almost every time to entirely clarify the water, and no term of subsidence will bring out that milky deposit. It is submicroscopic matter that will not go down except by means of a coagulant. After being properly coagulated it is easily removed by filtration.

Dr. Swarts—How long will the filter operate?

Mr. Earl—From 12 to 24 hours between washings.

Dr. Seneca Egbert, Philadelphia—In my humble judgment the city of New Orleans is going at the problem in the right way, and they seem to forestall, as far as they can, the various questions that may arise as the city grows larger. I was especially glad to see that they intend to use the separate system in a large part of their sewerage plan; and the idea of the pumps at the substations driven automatically by electric motor, using power from a central station, was very unique to me. It struck me as a clever solution of a difficult problem. It may have been tried in a crude way before, but I do not know of any place where it is done on such a large scale as here. I think, with the longest lines not over eight miles in extent, they will get a speedy removal, within five or six hours, of their sewage, which means the elimination of a great deal of annoyance, offense and danger from stagnant or decomposing sewage.

Of course, as to the water supply, we have to take their word about the sedimentation, coagulation, etc. It is interesting to learn that coagulation will be used on such a large scale, and also that the work can not be done with the sand filters that are working so well elsewhere, as, for example, in Albany, N. Y. But I understand the problem that confronts this city, and can appreciate this solution of the problem.

Special Article.

THE PURIFICATION OF WATER SUPPLIES BY SLOW SAND FILTRATION.

(Concluded from page 967.)

IV.

WATER FILTRATION IN THE UNITED STATES (CONCLUDED).

C. THE PHILADELPHIA FILTER.

The city of Philadelphia has long and faithfully served sanitarians as a text for discourses on the effect of polluted drinking water. Not only has the physical character of the city water, as drawn from the tap, ordinarily been sufficient to excite the repugnance of every stranger who has tarried for a while within the gates, but the citizens of Philadelphia themselves have for years suffered so severely from typhoid fever that the local conditions have been a by-word and a reproach all over the United States. Civic pride, some of which undoubtedly exists in Philadelphia, can hardly contemplate with equanimity the yearly tale of youths and maidens offered up to the Minotaur of ignorance and neglect.

At intervals, during more than a quarter of a century, various public-spirited organizations have employed experts and commissions to report some plan for purifying the water supply and for abolishing the source of so much municipal suffering and disgrace. All these projects, however, although they have been worked out with more or less elaboration and usually with due regard to the state of knowledge concerning water purification at the time of their presentation, have not until very recently received serious consideration by the responsible authorities. About 1898-9 an outbreak of typhoid fever of unusual severity caused even the supine municipal authorities of Philadelphia to recognize the imperative necessity for immediate action.

In 1899 a commission of distinguished engineers appointed by the mayor presented a report recommending (1) the adoption of a project by which the waters of the Schuylkill and Delaware rivers should be purified by filtration; (2) the immediate improvement of the existing plant in accordance with the detailed recommendations of their report. This report, in its main features, has formed the basis for the final plan for filtering the entire city water supply, and at this date the construction of a comprehensive filtration plant is well under way.

One feature in the situation at Philadelphia demands consideration not so much from its rarity as from its deplorable frequency of occurrence in American cities.

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[1] This question and reply referred to the water works pumping stations. The sewer pumping stations are located on the lines of most economical gravity collection in low areas; from such stations shallow force mains leading to the river are much cheaper than the very deep sewers that would be required if pumping stations were located on the river bank.

This is the enormous consumption of water as compared with the consumption in all European cities and in some of the more carefully controlled American municipalities. All responsible authorities are agreed that the Philadelphia consumption of 175 to 200 gallons daily per capita indicates excessive waste. When so large an amount of water is demanded by a municipality, the cost of constructing proper filtration works is proportionately enhanced and in some cases may prove an insuperable obstacle to the installation of a suitable plant. It is well known that the consumption of water can be reduced to a reasonable point by the introduction of the metering system and other devices, which tend to diminish avoidable and wilful waste. "Consider, if you please, what would happen to the city gas-works if bills were collected according to the size of the house and the number of fixtures, the charge being the same whether gas was used in an economical and modern manner or whether every jet was lighted and allowed to burn all night and all day long, too, for that matter. You will see that with such a system gas would be deliberately wasted on every hand and the consumption would increase to several or many times the normal and proper amount. As the works would not be operated at a loss the rates would be raised to cover the needless use of gas and would be much higher than would be necessary under economical conditions. This condition of affairs is so absurd that it is difficult to give it serious consideration, but it is precisely what is being done in the water department, in spite of the urgent protests and appeals of the present chief and of his predecessors for the substitution of a more rational and business-like basis."

The plans for the yield of water from the Philadelphia filters are on a most liberal scale, and if reasonable measures for the restriction of water waste are gradually introduced the cost of filtration to the citizens of Philadelphia should not on this ground prove excessive. The city of Philadelphia has in the past derived its water from the Delaware and Schuylkill rivers, over 90 per cent. of the supply coming from the latter source. The Schuylkill river has been the recipient of sewage not only from a rather densely populated watershed, but from important suburbs of Philadelphia itself. A large amount of the drainage from these suburbs has been permitted to enter the river only a short distance above the city waterworks, and, although attempts have been made to lessen this pollution by the construction of intercepting sewers and in other ways, recent investigations and occurrences have shown that the Schuylkill is still grossly and dangerously contaminated. In addition to receiving a mischievously large amount of sewage, the Schuylkill is most objectionable from the point of view of its mineral constituents. Near its source it receives sulphuric acid from the oxidation of the sulphid of iron in the coal, and this sulphuric acid is neutralized during the passage of the river through extensive limestone formations, so that the reaction of the river water, on reaching the city, is excessively "hard" and unsatisfactory. The river also passes through a soft red shale which is easily disintegrated and at certain times contributes its quota of suspended matter to the stream. Mr. Trautwine, who was for some years chief of the bureau of water, writes as follows concerning the mineral matter in suspension:

> In times of flood this formation (the red shale) sends vast volumes of its substance in suspension into the stream, which at such times runs blood red. The first effect of a general storm is therefore a visitation of red mud, which a day or two later is followed by water charged with coal dust. The writer has seen water drawn from faucets in Philadelphia, after storage in the city reservoirs, so black from coal dust as to be scarcely *distinguishable from ink.*

The serious character of the task thus confronting the citizens of Philadelphia and the necessity for radical action can be readily appreciated from the facts just given. The custom of supplying an inordinate quantity of water, combined with the unfortunate character of the Schuylkill, both as regards mineral and organic constituents, caused the path toward water purification to bristle with unusual difficulties.

A very fortunate solution of the problem, albeit an expensive one, has been found. This is nothing less than the virtual abandonment of the Schuylkill as the source of the main city supply, recourse being had to the Delaware river for the major portion of the new supply. This involves practical reconstruction of a large portion of the distribution system and entails the reorganization of the whole system of expensive reservoirs and pumping stations. Taken in addition to the cost of filter construction proper, it will be seen that the expense of the whole sweeping improvement will be indeed formidable.

Filter beds are now being constructed in four separate localities: (1) At Belmont on the west bank of the Schuylkill, comprising eighteen filter beds and designed to supply West Philadelphia, a region of the city which in the past has been a severe sufferer from typhoid fever. Ultimately 26 filters will be installed at this point. The water for this plant is taken from the Schuylkill. Ample space is allotted for a sedimentation basin and a pure water reservoir, and space is available for the extension of the system when necessary. (2) Lower Roxborough, on the east bank of the Schuylkill, is equipped with five filter beds which have been in operation some months. (3) Upper Roxborough, a plant of eight filters, some of which are now in operation. The upper and lower Roxborough stations are designed to supply the Germantown district. (4) The main filtering plant in the new system is at Torresdale on the Delaware river, well above the influence of the city sewage and in a district adapted for filter construction. Here an enormous plant of fifty-five filters is being installed, with prospects that ten more filter beds will be contracted for in the near future. The total capacity of the Torresdale works, after preliminary rapid filtration of the water, will be 248,000,000 gallons daily.

The method of construction is substantially the same at all of these stations. The first filter beds built, those at lower Roxborough, are about half an acre in area and are somewhat smaller than the later filters, those at Belmont and Torresdale being about three-fourths of an acre each. Full advantage has been taken of the experience gained in the construction and operation of the Albany filter and several improvements suggested by recent American experience have been carried out. The filters are all covered, and both piers and vaulting are of concrete, a construction device that marks an advance over the brick piers laid at Albany. Great care is being taken at Philadelphia in the arrangement of the graded layers of gravel, five layers, ranging from six inches to one inch in thickness, being used. An ingenious and most economical contrivance is being employed at Roxborough for removing the scraped sand from the surface of the bed to the central court, where it is washed and stored. In the older works the "scrapings" are wheeled out in barrows. The new sand-ejector invented at Philadelphia, by means of which the sand, shoveled into a hopper directly from the surface of the bed, is conveyed by a stream of water to the outer court, ought to diminish very greatly the expense of operation.

During the course of the work many experiments have been made under the direction of Mr. Hill, chief engineer in the work of construction, and some of these led the officials to believe that by subjecting the water to preliminary rapid filtration through layers of gravel, slag and sponge it will be possible to operate the slow sand filters at a rate far beyond that which is customary when raw surface waters are applied directly to the sand beds. It is even believed that as high a rate as 6,000,000 gallons daily per acre can be reached after this preliminary treatment. If the event justifies this hope, the filtering surface needed to supply the city, even with its present exorbitant demand, can be greatly reduced. It is éstimated that the Torresdale filter-beds alone will supply more water than is obtained by the city of London from all sources, over twice the daily consumption of water in Paris and four times that in Berlin.

The general opinion prevails among informed engineers that the construction of the Philadelphia filter plant is being conducted in a careful and efficient fashion, and that when the works are completed they will compare favorably in point of good construction with any similar undertaking. It is most unfortunate that, together with this belief in the high character of the work as actually performed, there should be a very general feeling that the price paid for the work by the city is inordinate. Rumors of favored contractors, of large "rake-offs" and of a general atmosphere of "graft" are so common in connection with the discussion of the Philadelphia situation that one is reluctantly compelled to lend them credence. It is, for example, a well-known fact, and one that is openly discussed, that all employes engaged in the work are assessed for "campaign funds" on a graded scale. It is said that 1 per cent. is levied on salaries up to $1,200, 1.5 per cent. on those up to $2,000, 2 per cent. on those from $2,000 to $2,500, and that even those holding high positions are not exempt. It is alleged on excellent authority that promotions are controlled absolutely by political influence, and it is claimed that some of the ablest engineers engaged in the work at the outset have been gradually driven out by a swarm of political appointees. It is surely unfortunate that so great an undertaking, involving the coöperation of many scientifically trained engineers and investigators, should thus suffer from being dragged in the slime of politics. The situation is one of general interest and concern. It is not a matter of merely local importance that the Philadelphia filter plant should be costing so much more than it ought to legitimately, but the event affects all cities interested in water purification, since a large expenditure at Philadelphia will be used as an argument for opposing the introduction of purification methods into other municipalities, on the ground of the costliness of the undertaking.

Museum Appliance.

ROUND OR SQUARE JARS FOR MUSEUM SPECIMENS.

D. S. LAMB, M.D.,
Army Medical Museum.
WASHINGTON, D. C.

An objection and, so far as I know, the only objection to the use of round jars for museum purposes is that the round jar distorts the view of the specimen. After many years experience in museum work I believe that the objection is more theoretical than real; practically there is no difficulty in getting a satisfactory view of specimens in round jars. The same objection, of course, would hold against the "Buchhold" preparations and against all specimens mounted under bell glasses. I believe, however, that in these cases also one who examines the preparation is brought so near it during the examination that the distortion is practically unrecognized.

On the other hand, the round jar has many advantages which I believe far outweigh its one disadvantage. The following may be mentioned:

First, the simplicity of the round jar, consisting as it does of but two parts, the jar proper and lid, both made of glass. The lid is ground so that it closely fits the mouth of the jar and thus prevents the entry of dust and evaporation of the preservative fluid. The matter of evaporation is of importance for some fluids, especially alcohol, but of little moment where hygroscopic fluids like glycerin are used. The square jar is fitted with a glass or metal top or cover which is either cemented tightly to the jar or not; if it is, it of course prevents entirely the removal of the contents of the jar. Otherwise the top is clamped to the jar by means of two metal or wooden screws. Some jars have also a bottom plate which is fastened to the top plate on each side by two pillars and these are made tight by nuts. To prevent evaporation and keep out dust, a rubber pad or ring is inserted between the plate and jar; and if there is also a bottom plate another pad is inserted there to avoid the shock of the jar against the plate. It hardly needs to be mentioned that the square jar is complicated as compared to the round jar.

The second advantage of the round jar is the ease and rapidity with which it may be cleaned and emptied. The cleaning is as simple as is the construction; its contents can be quickly changed and its contained specimen can be removed and replaced in a moment.

To keep the metal work of the square jar clean and bright would be a task indeed in a museum of some thousands of jars. The brass mountings quickly tarnish and indeed at the best the jar with its mountings lacks the beauty and grace of the round jar. And to change the contents or remove the specimen from the square jar requires the unscrewing of the clamps and removal of the rubber pads. Sometimes the screws are rusty and the rubber often adheres to the glass so firmly that it has to be torn away and is ruined in doing so. It must be stated in fairness that sometimes the lid of the round jar sticks closely to the neck and requires to be tapped with a mallet to be loosened.

Third, an objection to the rubber pad and ring is that some preservative fluids act on the rubber, rotting it and causing not only a discoloration of the fluid itself but a permanent discoloration of the specimen.

Fourth, the round jar has attached to the under side of its lid a hook on which the specimen may be hung by a thread; the removal and replacing of the specimen is thus made easy. Nothing could be more simple. The absence of the hook from the square jar (for it is usually absent), renders it necessary many times to make a glass frame to which the specimen may be attached; this frame is of course very liable to be broken, in which case a new one is necessary.

Fifth, the round jar adapts itself to the shape of many specimens such as the entire brain and heart to which the square jar is hardly ever suitable; and almost any specimen can be mounted to look well in a round jar. The esthetic effect is of some importance, indeed of much importance to a museum.

Sixth, there is no difficulty in obtaining round jars of clear glass, whatever the size. Most of the square jars in the market are not clear and are not of even thickness, which is a serious objection also, since the wavy and uneven glass must cause some distortion of view.

Seventh, the cost of round jars is, I believe, about one-third that of square jars of the same capacity and of good quality.

It seems to me that a consideration of all the advantages named would give the preference to the round jar, especially in the case of a museum of any size.

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EXAMINATIONS FOR MEDICAL STUDENTS.

The American student, more than the medical student of any other country perhaps, dreads what he calls the "ordeal" of an examination. Teachers and students both, especially in the middle and western states, are apt to inveigh against the evils of examination systems, sometimes, perhaps, without regarding sufficiently the advantages which are derivable from well-conducted examinations. In many medical schools students are subjected to no examinations at all, except a superficial test at the end of each individual course; in other schools there is one great final examination at which the student either succeeds or succumbs, this examination often being limited to the clinical branches alone on the theory that the clinical work necessarily includes a knowledge of the practically important portions of the fundamental sciences; in still other schools yearly examinations are imposed, the student being subjected each spring to an examination covering the whole of the subject matter studied since the preceding October; finally, some few schools and in Canada some of the provincial governing boards have instituted a primary and a final examination, the former covering the work in the fundamental branches of the first two years, the latter the work in the clinical branches of the last two years, a system not unlike the one prevalent in Germany and in Austria.

It is not our purpose at this time to enter into a discussion of the advantages and disadvantages of various examination systems, nor to say anything in detail about the conduct of an ideal primary or final examination, though we may perhaps do so later. We desire, however, to say a word about one feature of examinations for medical students that is too frequently overlooked, namely, the educational function subserved. Too often by both student and teacher it is the selective function of an examination alone which is considered—the examination is regarded as a sieve which lets men whose attainments are of small dimensions fall through. But this selective process ought to be the least important feature of an examination. The main stress should be laid on the educational value of the test. The clearness of thought, the accuracy and brevity of statement, the avoidance of tautology and irrelevant assertion that a properly conducted written examination cultivates, are qualities too often found wanting in the writings of those medical practitioners who have not gone through, as medical students, the careful training that a well-conducted series of examinations can give. Again, an oral examination demands presence of mind on the part of the student, a readiness of wit, a coolness and freedom from embarrassment, if he is to do his best—and these also are qualities which, if well developed in student days, will stand the physician in good stead at the bedside and in the consultation room in later years. In a good practical examination, conducted by a master of the subject examined on, the student has the opportunity of showing what he has learned to do, rather than what he has remembered by cramming, and of illustrating the extent of his assimilative knowledge rather than the dimensions of his portative capacity.

The educational value of an examination will, of course, vary enormously with the character and professional ability of the man who sets it. An examination ought always to be a sanction for the highest kind of teaching in the course or courses preceding it, and ought by its results to set the stamp of approval on the best kind of study and practical work. We shall not have solved the much vexed examination problem until we find that those students stand highest at examinations who, having the best natural capacity, have had the best instruction, and have done their work in the best possible way.

FAITH HEALING AND CRIMINAL NEGLECT IN NEW YORK.

A very important legal decision as regards the practice of faith healing was handed down last week by the Court of Appeals of the State of New York (in that state the court of last resort) in the case of the People vs. Pierson. The defendant, a follower of John Alexander Dowie, was sentenced two years ago to pay a fine of $500, or undergo 500 days' imprisonment for criminal neglect in failing to call a physician to attend an infant adopted daughter in a case of pneumonia, which eventually proved fatal. Under the penal code in New York, a person who omits without lawful excuse to perform a duty by law imposed on him, to furnish food, clothing, shelter or medical attendance to a minor, is guilty of criminal neglect and is liable to fine or imprisonment, or both, according to the will of the judge. Pierson's case was selected by Eddyites and faith healers generally as a test, and was taken to the court of next resort, the appellate division of the Supreme Court, which reversed the decision of the original trial court, holding that medical attendance as referred to in the criminal code does not signify absolutely the attendance of a regular medical practitioner in the ordinary sense of that term. Money was liberally donated from all over the country by those interested in faith healing, and eminent counsel was employed so as to secure, if possible, a favorable decision. The Court of Appeals now reverses the decision of the appellate division and upholds the original conviction. In the opinion of the court, as written by Justice Haight:

> It would seem that the legislative intent is reasonably clear, although possibly more concise language could have been employed. The section of the code under which the indictment was found contemplates that there are persons on whom the law casts a duty of caring for minors. Sitting as a court of law for the purpose of construing and determining the meaning of statutes we have nothing to do with variances in religious belief and have no power to determine which is correct. We place no limitations on the power of the mind over the body, the power of faith to dispel disease, or the power of the Supreme Being to heal the sick. We merely declare the law as given us by the legislature. We find no error on the part of the trial court which calls for a reversal.

This is the first time, we believe, in this country that a court of last resort has decided this vexed question of the bounden duty of parents and guardians to furnish proper medical attendance to minors. It is all the more fortunate that this decision comes in perhaps the most important state of the Union and from a court whose opinions are held in high estimation all over the civilized world. This declaration of the meaning of a statute is expressed in no doubtful language and formulates with absolute clarity the sentiment that must be supreme in such matters unless confusion is to supervene. It should apparently not be a difficult matter to secure the enaction of corresponding statutes in states where they do not already exist. There is no doubt that this opinion of the Supreme Court of New York will stand as a precedent to be followed in all future decisions in this matter under corresponding circumstances. The decision is all the more welcome and must prove a source of encouragement to those who are striving faithfully for the extension of proper medical regulations since it followed the reversal of the trial court's decision by the appellate division—a reversal which proved a serious setback to those who were honestly laboring to save misguided individuals from the unfortunate results of their own illusions and especially to preserve the minors under the charge of such individuals from suffering at the hands of their legal guardians. There seems every reason to hope that even more good than can be anticipated at the present time will follow from this definition of the phrase, "medical attendance," as indicating the necessity for the presence of a legally qualified practitioner.

There is an added interest in the case in that the reversal by the appellate division was not unanimous, but was made with Justice Goodrich dissenting. It is this dissenting opinion that the Court of Appeals now accepts on the very day that Justice Goodrich read an important paper before the Medical Society of the State of New York on "Medicolegal Aspects of the Roentgen Rays." Justice Goodrich's personal relations to the medical profession are most intimate and it was his close knowledge of medical affairs that evidently guided him to the real solution of a vexed problem in the dissenting opinion which now becomes New York State law. It would seem clear that this more intimate acquaintance is of itself eminently desirable for both professions and that it will surely lead to the happiest results in a mutual understanding and mutual support for measures that manifestly involve the public good, yet are sometimes misunderstood by the public as being the index of narrow professional, or even selfish, purposes.

WORK AT THE SMALLPOX LABORATORY IN CLEVELAND.

A most gratifying tendency of the times is one exhibited by the boards of health in some of our larger cities. We refer to the appropriation of funds for the support of special researches bearing on the causation, nature and treatment of some of the diseases more prevalent in the cities concerned. A notable example in this direction is that set by the board of health of Cleveland. The authorities in that city have voted a liberal fund for the investigation of smallpox. The scourge from which the city has suffered for several years certainly justifies a large expenditure for this purpose. The Smallpox Research Laboratory, which has been established in Cleveland under the directorship of Dr. Wm. T. Howard, Jr., professor of pathology in Western Reserve University, has, during the past year, been the scene of active work carried on by the director and by several assistants under his supervision. The last number of the *Journal of Medical Research* contains several reports from this laboratory, among which are included "A Study of the Agglutinating Hemolytic and Endotheliolytic Action of the Blood Serum in Variola," by Dr. Howard, and "Studies on the Etiology and Pathology of Variola," "Streptococcus Pyogenes in Variola," "Bactericidal Action of the Blood Serum in Variola and in Varioloid," by Drs. Perkins and Pay. The titles of these papers alone indicate the high order and modern character of the work which is going on in the laboratory, and a perusal of their contents reveals an accuracy of observation, a comprehensiveness of grasp of the problems involved, and a thoroughness of research which make one feel that could more laboratories be conducted in this scientific way there would be less dissatisfaction than there is at present at the disposition which is made of public funds in connection with city boards of health.

The Cleveland authorities have done well to direct the researches toward a disease which, at this time, is of such great local importance, aside from the general interest which attaches to it. We have always thought it would be well if the clinicians of various cities would concentrate their attention on the diseases which most largely prevail in their midst, rather than dissipate their interests and energies by dividing their investigative work among the host of rare maladies that they meet. The success of the studies of typhoid fever and malaria in Baltimore by the hospital physicians there illustrates what we mean. Smallpox is being studied in Boston and Cleveland. Let other cities pick out the problems which more particularly belong to them and progress should be rapid.

THE REORGANIZATION OF THE BRITISH MEDICAL ASSOCIATION.

The new plan of organization of the British Medical Association, which went into effect about a year ago, according to an editorial in the *British Medical Journal,* October 3, is proving decidedly successful and satisfactory. This is shown by the increased membership and by the greater activity in every part of the complex organization. The branches and divisions are showing an activity markedly in contrast to former conditions. The prospect is that if this is kept up it will in time bring the whole profession within the association. The new constitution of the British Medical Association which was adopted after considerable discussion is in many respects similar to that of the American Medical Association. The British representative body is similar in every respect to the House of Delegates of the American Medical Association; its members are elected by the "branches," which are—organically, not geographically—similar to our state associations. The "branches" are made up of the "divisions" which are their units, as the county society is the unit with us. The arrangement for including the colonial branches—Canada, Australia, etc.—is rather mixed and not easily comprehended by an outsider. The editorial refers to the good work that is being done by certain secretaries of branches and of divisions, and also by the general "organizing secretary," showing that the work of organization is being pushed with as much vigor there as with us. While their annual dues were increased from about $5 to about $6 to meet the increased expense—which action some thought would cause many to drop out—the work seems to be very successful and the membership is increasing rapidly to the point where it will include all who are eligible.

THE SIGNIFICANCE OF THE CENTRAL SULCUS OF THE CEREBRAL CORTEX FOR LOCALIZATION.

Opinion has swung to and fro for a long time as to the relation in which the cerebral sulci, and especially the central sulci of Rolandi of the two sides, stands to the localization of function in the cerebral cortex. The early view that functional areas are sharply marked off from one another by the various sulci gradually gave way before the doctrine that the sulci and gyri are of morphologic interest only and possess no delimiting functional significance whatever. Recent experiments made on motor localization in the cortex indicate, however, that at least for the sulcus centralis in the anthropoid apes, a very sharp localizing significance is maintainable. Sherrington has shown that if the animals be examined under precautions greater than those hitherto taken, no motor response can be elicited by stimulation behind the central sulci, all the cortical motor innervations apparently starting out from the anterior central gyrus situated in front of the sulcus. Sherrington's observations are being confirmed by other workers, and it has now become necessary to revise the well-known and time-honored charts of the motor cortex which clinicians use, and to bring them into accord with this newer knowledge. Even the upper and lower knees of the sulcus have definite localizing significance, one set of motor functions being constantly represented above each knee, another below. In how far time and further investigation will reveal a similar practical physiologic significance for the other sulci of the cerebral hemisphere it is impossible to say. It would certainly be convenient for the surgeon, especially if brain surgery goes on developing at its present rate, to have such clean-cut landmarks as the larger cerebral sulci to serve him as a reliable guide to functional areas when he has to apply his knife. It seems to us improper, however, that the exploration of other regions of the brain will ever yield us such definite and satisfying information concerning functions as the study of the motor areas has afforded us. Still, it is rash to make prophecy; new men may arise and new methods may be devised which will some time chart out for us even those great silent territories which Flechsig calls "association centers."

THE CORDITE EATERS.

It is a well-known fact that all confirmed users of stimulants and narcotics are not very particular as to the source of the agent they use. We have heard of sailors drinking off the liquor from a preserved admiral. One of the most peculiar methods of inducing intoxication, however, of which we have heard lately is the nitroglycerin habit in the British army. The material used in this instance is cordite. This is employed for the cartridges of small arms of that service, and consists of 58 parts of nitroglycerin, 37 of gun cotton and 5 parts of mineral jelly. It would seem that this combination would be rather awkward to masticate; nevertheless the British soldiers do not seem to find it so. In the *Journal of the Royal Army Medical Corps,* October, Maj. J. W. Jennings of the British service reports his observations in South Africa. It appears that the drug produces in the novice a racking splitting headache which may last for 24 hours or more, but the experienced user manages to obtain some satisfaction from its employment. When taken with beer or tea it seems to produce a heavy sleep, followed by stupor lasting approximately from 5 to 12 hours. It is difficult to awaken the subject, and when apparently awakened the cordite user does not seem to recognize his surroundings. There is a dull boring headache, slight facial twitching, protrusion of the eyes, a slowness of comprehension, and a disinclination to food, accompanied with a tendency to vomit. Taken in solution, as with tea, it appears to produce an exhilarating effect. If many take the beverage all begin talking at once, seeming anxious to inform each other of everything that has happened since their birth. This lasts for two or three hours, after which the effects seem to die away.

and sleep follows. If beer is taken during the excitement it brings on a combative and destructive tendency; the worst qualities of the individual are exhibited. Dr. Jennings gives a number of interesting personal histories and thinks it may be a new and rather peculiar form of vice. He does not see how the effects are likely to help a man to escape service unless it be by imprisonment as a hopeless lunatic or as a suicide. It was this claim that it was used to enable men to obtain their discharge that first called his attention to its use, but instead of being particularly for that purpose it seems to be a characteristic drug habit and a method of intoxication which has originated under special conditions. The subject is worthy of the investigation of military surgeons and officers generally. There must be many drug habitués who drift into the army, and if they can not get their ordinary intoxicant they take some other, as in this case, and add another to the already too extensive catalogue of "drugs that enslave."

CENSORSHIP OF NEWSPAPER ADVERTISEMENTS.

Justice Mayer of New York City, in a paper read at the 175th meeting of the Society of Medical Jurisprudence, October 13, on the subject of "Criminal Procedure Against the Unlawful Practice of Medicine," said some things that are not only of great interest to the medical profession, but that are worthy of arresting the attention of all serious-minded journalists of this country. He declared that the worst agency in New York to-day —as, of course, it is also in every large city throughout the country—in helping the person who sells either real or pretended abortion remedies, is the newspapers, for they make it possible to ensnare the unwary, the superstitious and the fearful. He adds: "I suggest that in the new school of journalism about to be established in connection with Columbia University there be a chair of advertising, and let it be taught to the young men of the newspaper profession that the first duty of a great newspaper is to censor its medical advertising." All those who are interested in the improvement of public morality will at once agree with this declaration of a distinguished member of the New York judiciary, who, with his opportunities as a justice of the Court of Special Sessions before which cases involving infractions of law in this matter are being constantly presented, is in a position to know by practical experience better than almost any one else the real causes that underlie the evils of which he complains. If it is possible it would be much better that this censorship he demands should be created by the voluntary good sense and the good will of the managers of newspapers than that it should be imposed on them by legal regulations; but those in control of some papers appear to consult only their commercial interests. The evils involved in this question have, however, of late years grown to such an extent as absolutely to require some regulation if public morality is not to suffer. As pointed out by Justice Mayer, the full extent of the criminality encouraged can not be estimated from the comparatively overt advertisements between the lines of which can rather easily be seen the criminal intent of the advertisers. Many apparently less reprehensible advertisements are only a cloak for criminal measures. "Many persons who advertise as palmists and clairvoyants," to quote Justice Mayer's words, "advertise simply to cover the giving out of medicines of the kind I have mentioned." Here is something for the responsible directors of newspaper policy to consider seriously. If their pretentions to help the cause of public morality mean anything, there is a clear method open to them by which to accomplish a great and lasting good.

Medical News.

DISTRICT OF COLUMBIA.

New Superintendent on Duty.—Dr. William A. White, Binghamton, N. Y., has assumed the duties of his position as superintendent of the U. S. Hospital for the Insane (St. Elizabeth's).

Medical School Opens.—The session of 1903-04 of Georgetown Medical School opened October 3 with addresses by Father Daugherty, director of Georgetown University, Drs. Joseph Tabor Johnson and George M. Kober.

American Public Health Association.—The thirty-first annual convention of the American Public Health Association of the United States, the Dominion of Canada, Mexico, and Cuba, will be held in Washington, October 26 to 30.

Woman's Clinic in New Home.—This institution, non-sectarian in character and a part of whose work is charitable, which was established thirteen years ago, has moved into its new hospital building at Thirteenth and T Streets, N. W. It is gathering a fund and is paying for its new home by degrees.

Society Elects Officers.—The Washington Obstetrical and Gynecological Society, at its meeting, October 16, elected the following officers: President, Dr. J. Wesley Bovée; vice-presidents, Drs. John F. Moran and Elmer H. Southron; recording secretary, Dr. J. Thomas Kelley; corresponding secretary, Dr. Edward E. Morse, and treasurer, Dr. John Van Rensselaer. The annual banquet followed.

Health Report.—The report of the health officer for the past week shows the total number of deaths to have been 92. There were 102 births and 13 stillbirths. There were 191 cases of typhoid fever, 18 cases of diphtheria, 18 cases of scarlet fever and one case of smallpox under treatment. The medical inspection of schools provided for at the last session of congress has begun. Printed regulations governing the medical inspection are being distributed to the teachers of the schools and the inspectors.

ILLINOIS.

Chicago.

Bequests.—The will of the late Henry J. Willing gives $5,000 each to the Chicago Home for Incurables and the Presbyterian Hospital, in the latter case to be used for the endowment of a bed in memory of his mother, Mary Jane Willing.

The Week's Deaths.—For the week ended October 17, the deaths numbered 459, 32 more than for the previous week and 14 more than for the corresponding week of 1902. The annual death-rate per 1,000 was 12.68. Acute intestinal diseases head the list with 51 deaths; other chief causes were: consumption, 45; pneumonia, 38; violence, 36, and heart diseases, 35.

Advisory Board Organizes.—The advisory board on management of county institutions has elected Dr. John B. Murphy president. The medical members of committees are as follows: Medical administration—Dr. Frank Billings, chairman, and Dr. Hugh T. Patrick; care of insane patients—Dr. Sidney Kuh, chairman, and Drs. Isaac A. Abt and Hugh T. Patrick; hospital for consumptives—Dr. Frank Billings, chairman, and Dr. W. A. Evans, and infirmary—E. R. LeCount.

Founded a Quarter of a Century.—The Chicago Gynecological Society held a banquet, October 16, in commemoration of the twenty-fifth anniversary of its foundation. In addition to an address by Dr. J. Henry Carstens, Detroit, reminiscent remarks were made by several members. The following officers were elected: Dr. Emil Ries, president; Drs. Joseph B. De Lee and Frank T. Andrews, vice-presidents; Dr. Palmer Findlay, secretary, and Dr. Charles B. Reed, treasurer; Dr. Gustav Kolischer, pathologist, and Dr. Rudolph W. Holmes, editor.

Dr. Frank Billings Submits to an Operation.—Dr. Frank Billings, who has been ill for some time, but who has remained at work in spite of his condition, submitted to an operation, October 15. The procedure was in the nature of an exploration, the gall bladder being suspected as the cause of the trouble. Dr. L. L. McArthur, assisted by Dr. A. D. Bevan, performed the operation. A congestion of the liver was found with cholecystitis, and gall-bladder drainage was established. Dr. Billings is doing well, and it is hoped he will entirely recover.

Decrease in Infant Mortality.—A well-nigh incredible decrease in the deaths and the death rates of the two most dreaded diseases of childhood was demonstrated during the week, says the department of health.

> Briefly stated, the records for sixteen years show that there were 2,152 deaths reported from scarlet fever during the eight years, 1887 to 1894 inclusive, while there were but 1,648 such deaths reported during the last eight years, 1895-1902 inclusive. In the first period there were 11,251 deaths from diphtheria and croup; in the second period only 7,093. The average yearly population of the first period was 1,050,000; of the second period it was 1,610,000—or 53.3 per cent. greater. In proportion to the increased population, the scarlet fever deaths decreased exactly 50 per cent. and the diphtheria and croup deaths decreased 59 per cent.

Reforms at Dunning.—The citizens' advisory board appointed several months ago to assist in the management of the county insane asylum, consumptive hospital and the infirmary, accompanied the County Board to Dunning October 14, and considered matters of scientific administration reform, and the new buildings and improvements needed. The plans as outlined by President Foreman, are as follows:

> Erection of three new cottages for insane patients at an expense of $60,000.
>
> Erection of five cottages for consumptive patients, with a central administration building, all structures to be connected by enclosed corridors, at an expense of $125,000.
>
> Erection of a modern morgue and pathologic laboratory, with an amphitheater for lectures.
>
> Erection of a training school for nurses and attendants.
>
> The present consumption hospital to be converted into a hospital for the sick insane.
>
> Erection in Chicago of a branch hospital for consumptives, where incurable cases may be treated.
>
> Erection of a central power house, surrounded by shops, where the patients may be provided with light employment, such as making clothing, brushes and brooms for the use of the institution.
>
> Installation of a vacuum system of steam heating in all institutions.
>
> Light manual labor provided for all patients in good physical condition.
>
> Books and games provided patients in the wards.
>
> Baseball games, band concerts and other amusements to be provided for the patients in an enclosed space on the lawn in seasonable weather.
>
> Clubrooms to be opened for the use of the nurses and attendants of the institutions.
>
> Better protection against fire to be supplied.
>
> The adoption of the latest scientific methods of treatment for insane patients.
>
> A complete reclassification of insane patients by grouping along scientific lines.
>
> Internes to be employed to assist the physicians in keeping a complete record of the history of cases.

MARYLAND.

Baltimore.

Deaths of the Week.—The deaths for the week ended October 17 were 168, an annual death rate per 1,000 of 15.61. Those from pneumonia rose to 18.

Bequests.—Mrs. Elizabeth A. Innes' will makes the following bequests: $4,000 to Church Home and Infirmary for the establishment of two beds; $500 to the Nursery and Child's Hospital.

Death in Narcosis.—A death occurred at the University Hospital, October 14, during the administration of ether for anesthesia. The patient, aged 22, had a severe cut in the palm of his hand. Shortly after administration was begun he began to vomit, the windpipe became clogged with food and he choked to death, notwithstanding an immediate tracheotomy.

Hospital Building Secured.—The faculty of Baltimore University School of Medicine has rented a building for hospital purposes. Drs. I. B. Kellar and E. C. Moriarty are resident physicians. Heretofore the school and hospital have been in the same building, the laboratory and dissecting room being elsewhere, but in the new arrangement everything will be concentrated in the college building except the hospital.

Personal.—On October 16 Dr. John D. Blake was elected chairman, and Dr. W. Edward Magruder secretary, of the Section on Clinical Medicine and Surgery of the Medical and Chirurgical Faculty of Maryland.——Drs. Hugh H. Young and Thomas Shearer have returned from Europe.——Dr. William Hewson, Baltzell, has returned from summering in Canada and Pennsylvania.——The friends of Dr. J. C. Hummer entertained him, October 11, on the occasion of his seventieth anniversary.

The Hebrew Hospital.—At the thirty-sixth annual Succoth festival banquet, October 11, $2,200 was raised for the Hebrew Hospital; $1,500 in legacies was reported during the year, and $1,735 in memorial gifts. The expenses for the year were $18,720, and the receipts $14,301. There were 296 inmates during the year, of whom 168 were discharged cured, 58 improved, 12 died; 127 operations were performed; 7,795 persons were treated in the dispensary; 8,692 prescriptions were compounded for the dispensary and 9,125 for the hospital.

MICHIGAN.

Personal.—Dr. James H. Reed, Battle Creek, has been reappointed lecturer of the third district of the state by the president of the state medical society.——Dr. N. Dudley Kean, Ishpeming, moved to Michigamme, succeeding Dr. Horace H. Loveland, who has gone East.

Lapeer County Society Election.—At the annual meeting of Lapeer County Medical Society the following officers were elected: Dr. Hugh D. McColl, Lapeer, president; Dr. Sparrow A. Snow, North Branch, vice-president; Dr. Peter Stewart, Hadley, treasurer, and Dr. Herbert E. Randall Lapeer, secretary.

Health of Michigan.—Reports to the State Board of Health for September concerning the most prevalent diseases in the state show that in 57 per cent. of the reports rheumatism and diarrhea were mentioned; in 44, neuralgia; in 42, bronchitis; in 39, tonsillitis; in 24, typhoid fever; in 23, cholera morbus and consumption, and in 22 dysentery.

Comparative Morbidity.—For September, compared with the average for September in the last 10 years, pleuritis, scarlet fever and smallpox were more than usually prevalent; and cholera morbus, dysentery, cholera infantum, influenza, intermittent fever, remittent fever, erysipelas, inflammation of brain, meningitis and measles less than usually prevalent.

The Most Dangerous Communicable Diseases.—Meningitis was reported present during September at 8 places, measles at 24 places, whooping cough at 32 places, smallpox at 57 places, diphtheria at 73 places, scarlet fever at 103 places, typhoid fever at 182 places, and consumption at 233 places. Reports, from all sources show meningitis reported present at 5 places more, measles at 22 places less, whooping cough at 4 places less, smallpox at 4 places less, diphtheria at 24 places more, scarlet fever at 11 places more, typhoid fever at 55 places more, and consumption at 7 places more, in September than in the preceding month.

September Mortality.—The total number of deaths reported for September was 2,722, or 78 less than the number for the preceding month. The death rate was 13.4 per 1,000 population. There were 682 deaths of infants under 1 year of age, 233 deaths of children aged 1 to 4 years, and 730 deaths of persons 65 years and over. Important causes of death were as follows: tuberculosis, 184; typhoid fever, 74; diphtheria, 42; scarlet fever, 6; measles, 2; whooping cough, 22; pneumonia, 38; diarrhea and enteritis, under 2 years, 408; cancer, 154, and violence, 163. There was 1 death from smallpox. Typhoid fever increased somewhat in mortality, as is usual at this time of the year. The number of deaths for the month was less than the number reported for the corresponding month last year.

MINNESOTA.

Lauds St. Paul's Health.—St. Paul's death rate is reported to be 9.2 per 1,000, and the health commissioner boasts that it is the most healthful city in the United States.

Presentation.—In honor of the thirty-second anniversary of the arrival of Dr. Charles Simpson in Minneapolis, a number of his professional friends met at his house and presented him with a gold-headed cane.

Would Bar Out Trachoma.—Ramsey County Medical Society has passed a resolution urging the St. Paul School Board to prohibit pupils suffering from trachoma or any other infectious diseases of the eyes from attending the public schools.

Academy of Medicine Election.—At the annual meeting of the Minnesota Academy of Medicine, held October 7, the following officers were elected: President, Dr. William Davis, St. Paul; vice-president, Dr. James H. Dunn, Minneapolis, and secretary and treasurer, Dr. Arthur W. Dunning, St. Paul.

The New College Year.—The medical department of the University of Minnesota opened September 8, with an address by Dr. Alexander J. Stone, St. Paul.——The College of Physicians and Surgeons, Hamline University, opened for its twenty-first school term, September 27, with a lecture by Dr. Charles W. Malchow, Minneapolis.

NEW YORK.

Pavilions for Insane Consumptives.—Governor Odell has approved the plans and specifications for the new tuberculosis pavilions to be erected at the Utica, Binghamton and Middletown state hospitals.

Against Tetanus.—Dr. Louis C. Ager, chairman of the Committee on Public Health and Medical Charities of the Kings County Medical Association, has sent to the various chairmen of the county associations a request to influence the members of the legislature and the local newspapers for the passage of an antitetanus bill at an early session of the legislature. The Buffalo Academy has, as previously reported, already taken action on this subject.

Alumni Dine and Hold Election.—The Central New York Alumni Association of Albany Medical College held its third annual meeting and banquet in Utica, September 30. The following officers were elected: Dr. Merritt B. Fairchild, Syracuse, president; Drs. Arthur C. Hagedon, Gloversville, Otis H. Deck, Herkimer, Leroy F. Hollis, Lacona, Ward E. Hunt, Little Falls, Israel M. Slingerland, Fayetteville, and William T. Hudson, Auburn, vice-presidents; Dr. Frederick H. Brewer, Utica, secretary, and Dr. A. Wieting Hedding, Syracuse, treasurer.

New York City.

Personal.—Dr. Joseph B. Bryant, who visited Chicago with ex-President Cleveland, held two clinics while there at Mercy Hospital, October 16.

Norwegian Hospital Staff Changes.—Dr. R. G. Moore has resigned and will take a service in the Orthopedic Hospital, Manhattan.——Dr. W. R. Hersman succeeds him, and the place of the latter as assistant has been filled by the appointment of Dr. L. W. Stork.

Day Treatment for Tuberculosis.—At the Metropolitan Hospital, Blackwell's Island a day-treatment system has been instituted in the tuberculosis department, whereby the female patients remain at the island during the day and are given the open-air treatment, together with medicine and good food.

Hospital for Consumptive Children.—Mr. John Seeley Ward, Jr., of the Association for Improving the Condition of the Poor, has returned from a trip abroad full of the determination to see what can be done toward establishing a seaside hospital large enough to care for at least 100 tuberculous children. He states that at the hospitals visited by him in the vicinity of Paris 29 per cent. were cured.

Asks for More Inspectors.—President Lederle of the board of health has asked the board of estimate for an appropriation for 1904 of $1,631,500, an increase of $597,108 over the appropriation for 1903. Of this $190,612 is needed for an enlargement of his staff, and part will be expended in providing for a summer corps of physicians for house-to-house inspection in tenement districts. He wishes also to appoint more inspectors for the prevention of contagious diseases; to look after the food and milk supplies, and to visit the factories and other places where children are employed and for the suppression of glanders.

Alleged Conspiracy to Evade Medical Examination of Immigrants.—Mr. Broughton Brandenberg, who has just returned from Italy as a steerage passenger in order that he might study the conditions of Italian emigrants coming to this country, has just unearthed what he believes to be a conspiracy, which directly affects the public health. He had with him a party of emigrants, and while they were waiting on the wharf at Naples to have their baggage examined and fumigated, they were approached by a man who offered for $5 to put through all their baggage without medical examination. After some parleying his services were accepted, and he proceeded at once, with the aid of assistants, to place counterfeit pasters on the baggage. A lead tag indicates that the baggage has been fumigated, a red label that the emigrants have passed the Italian government officials, and the red label that the representative of the United States consul has seen the other labels affixed. Our own officials accept this evidence of medical inspection of emigrants except as regards the head and eyes. After the party and baggage had been passed on board the steamer, Mr. Brandenberg informed the consul, and as a result three of the men were arrested. On them were found a large number of the counterfeit seals and pasters, and on searching the baggage on the vessel it was discovered that 68 out of 140 pieces were provided with these counterfeits.

Buffalo.

Personal.—Dr. Montgomery A. Crockett has returned from Europe.——Dr. Allen A. Jones has returned from Big Moose Lake in the Adirondacks.

Hospital Moves.—The Riverside Accident Hospital has removed into its newly-renovated home on Swan Street, where all emergency cases can be attended to.

Club Election.—The Roswell Park Medical Club elected as president Dr. Frederick C. Busch; vice-president, Dr. James A. Gibson, and secretary-treasurer, Dr. George F. Cott.

OREGON.

Personal.—Dr. DeWitt A. Paine, Eugene, has retired from practice and will move to Portland.——Drs. David H. Rand and George Ainslie and wife of Portland have returned from Europe.

State Needs Institute for Feeble-Minded.—The Oregon State Medical Society, at its recent meeting, favored the maintenance at state expense of a feeble-minded institute separate from the present State Insane Asylum at Salem.

State Society Elects Officers.—At the thirteenth annual meeting of the Oregon State Medical Society, held in Portland, September 29 and 30, the following officers were elected: President, Dr. Walter T. Williamson, Salem; vice-presidents, Drs. George W. Tape, Hot Lake, Elmer E. Ferguson, The Dalles, and Mae H. Cardwell, Portland; treasurer, Dr. Jessie W. McGavin, Portland; secretary, Dr. Luther H. Hamilton, Portland; councilors, Drs. Simeon E. Josephi, R. C. Coffey and George F. Wilson, Portland, and Calvin S. White, Gervais, for one year; Drs. William J. May, Baker City, and Jacob A. Fulton, Astoria, for 2 years; Drs. William F. Amos, Portland, and William House, Pendleton, for three years, and Drs. Walter T. Williamson, Salem, and Samuel T. Linklater, Hillsboro, for 4 years; delegate to the American Medical Association, Dr. Charles J. Smith, Pendleton, and alternate, Dr. Kenneth A. J. Mackenzie, Portland.

PENNSYLVANIA.

Personal.—Orders have been issued appointing Dr. Henry Norris, Philadelphia, assistant surgeon of the Third Regiment Pennsylvania National Guards, with the rank of first lieutenant.

Hospital Day at St. Luke's.—St. Luke's Hospital, South Bethlehem, Pa., celebrated "Hospital Day" October 17. An address was delivered by Dr. Edward Wallace Lee of New York, and a class of nurses was graduated.

Insane Hospital Crowded.—Superintendent Orth of the Harrisburg Insane Hospital says that the attention of the courts and the legislature has been repeatedly called to the pitiable crowded condition of the hospital. There are now 213 patients in the hospital beyond its capacity. The overcrowded condition has existed for ten years.

Philadelphia.

Girard Memorial Tablet.—A tablet to the memory of Stephen and Mrs. Girard will be unveiled in November in the Assembly Hall of the Pennsylvania Hospital.

Lectures on Tropical Medicine.—A course of lectures on tropical medicine will be given at the Jefferson Medical College by Capt. Charles F. Kieffer, assistant surgeon U. S. Army. The lectures will be given at 4 p. m. each Monday in the amphitheater of the hospital.

An Unwilling Bather.—John F. Rapp and his wife, Maggie K. Rapp, charge abuse and cruelty against the board of health and bring suit against the city for $25,000 for the alleged forcible removal of the latter from her home, while sick, and compelling her to take a cold disinfectant bath at the Philadelphia Hospital.

Smallpox Continues.—For the week ended October 17, 54 new cases of smallpox were reported to the bureau of health. Within two days, 30 cases were reported. This is the greatest number for one week in the past two years. Eleven new cases were reported for the previous week. The authorities state that the disease will continue so long as people refuse to be vaccinated and there is no compulsory vaccination law.

Faculty Changes.—Dr. George W. Pfromm has been elected clinical professor of applied therapeutics in the Medico-Chirurgical College, and Dr. Hilary N. Christian clinical professor of genito-urinary diseases. Dr. Judson Daland has been nominated by the faculty for election by the board of trustees as professor of clinical medicine. Dr. Mitchell P. Warmuth has been elected demonstrator of operative surgery, and Dr. S. Leon Gans demonstrator and chief of clinic of genito-urinary diseases.

Voluntary Advisory Board.—Drs. William D. Robinson and Charles D. Hart, inspectors of the Eastern State Penitentiary of Pennsylvania, who were appointed as a special committee to obtain the voluntary services of an advisory board of physicians and surgeons, announce the following members of such a board: Surgeon, Dr. Robert G. LeConte; physician, Dr. Judson Daland; ophthalmologist, Dr. George E. de Schweinitz; otologist and laryngologist, Dr. Francis R. Packard; alienist, Dr. Horace Phillips. These will act as consultants with the prison physician.

Wants Medical Inspection in Schools.—Dr. Edward Martin, director of the Department of Public Health and Charities, has asked the board of education to allow a system of medical inspection in all the public schools. It is the plan to have one of the regular city medical inspectors call at each school once a week, and with the coöperation of the principal, to inspect all the children of the school, prescribe treatment when needed, send home those requiring quarantine, receive reports of sickness in the homes of children, and when parents are believed to be ignorant to send a visiting nurse to instruct the mother in the care of the sick child.

Sand May Cause Typhoid.—Regarding the large number of typhoid fever cases occurring in sections of the city supplied with filtered water, Dr. A. Frank Ziegenfus, in an open letter, advances the theory that the infection is from sand dredged or pumped from the Delaware river bed, which the contractors are using in construction of the filter beds. The use of such sand to "purify" Philadelphia's water supply is severely condemned, especially when there are extensive banks of the best surface sand near at hand. From another source attention is called to what are considered grave defects in the new filtration system being constructed, namely, absence of provision for sunlight and aëration.

X-Ray and Light Research.—At the last session of the legislature $25,000 was appropriated to the University of Pennsylvania for a laboratory for *x*-ray research and for Finsen light apparatus. The department will be connected with the University Hospital. It is planned to build a laboratory in connection with the Agnew pavilion. Dr. Henry K. Pancoast, assistant instructor in clinical surgery, and assistant demonstrator of surgery, will have charge of the department. It is the purpose to establish a very complete Finsen light plant, with the prospect of undertaking the first extensive experiments conducted in this country by this method in the treatment of diseases of the skin.

The Moseley Education Commission.—Dr. J. Rose Bradford, professor of medicine, University College, London, and Prof. W. H. Gaskell, fellow of Trinity Hall, Cambridge University, and university lecturer in physiology, were the first members of the Moseley Education Commission to visit Philadelphia. This commission, composed of some of the most distinguished British educators, are visiting this country as the guests of Alfred Moseley, M.P. Their work will include the study of our educational system from the elementary schools to the technical and professional schools and universities. The commission will be tendered a reception by the American Academy of Political and Social Science on the evening of October 24, at which distinguished educators will be present. Dr. Bradford and Professor Gaskell were the guests of Dr. Hobart A. Hare at dinner on October 16. Dr. Bradford purposes visiting New York, Baltimore, Washington, Chicago, Ann Arbor, and Harvard and Yale universities. Dean Charles H. Frazier of the Medical School of the University of Pennsylvania, on October 16, entertained Dr. Bradford and Professor Gaskell at luncheon, at which a number of the faculty were present. The visitors were afterward shown through the various departments of the university.

TEXAS.

Examiners Meet.—The regular State Board of Medical Examiners met at Fort Worth, October 13, and examined 34 candidates for license to practice medicine, and one midwife.

Sanitarium Cornerstone Laid.—On October 11 the cornerstone of Providence Sanitarium, Waco, was laid by the bishop of Galveston with appropriate ceremonies. The institution will cost, with equipment, over $100,000.

Yellow Fever at Laredo.—On October 19, the new yellow fever cases numbered one more than on any day since the outbreak. The official bulletin is as follows: New cases, 36; deaths, 5; total cases to date, 436; total deaths to date, 32.

GENERAL.

Honolulu Hospital Receives Gift.—A former resident of Honolulu, Charles R. Bishop, San Francisco, has given $50,000 to Queen's Hospital, Honolulu. Most of this will be spent in erecting a wing, which is much needed.

FOREIGN.

An outbreak of cholera is reported in Bethlehem, Palestine.

Dowieite in Prison for Cruelty.—On a charge of cruelty to his child, a Dowieite in London was sentenced to a month's imprisonment at hard labor. The little girl broke her collar bone and was compelled to suffer with the break untreated.

Hygienists at Home.—The French Académie de Médecine has always taken the lead in matters of hygiene and its resolutions have commanded the attention of the world. All Paris is smiling now at the discovery that in the hall occupied until recently by the académie each new carpet needed in the century of its existence has been laid on top of its worn and dusty predecessors—ten layers in all.

Antistreptococcus Serum in the Moscow Hospitals.—The Institute of Bacteriology at Moscow has petitioned the municipal authorities for means to defray the expenses so that antistreptococcus serum can be supplied to the hospitals free of charge. The authorities have empowered the physicians in the hospitals to test and report on the serum, and if their report is favorable funds will be appropriated for the desired purpose.

"Archives Latines de Medecine et de Biologie."—This is the title of a new medical monthly recently started by prominent physicians in France, Spain and Italy, to contain articles in the Latin tongues. Each communication will be published in the writer's own language, and be followed by a summary in the two other languages, French, Spanish or Italian as may be. Drs. A. Robin and R. Blanchard of Paris, Cortezo and Ramon y Cajal of Madrid, Maragliano of Genoa and Grassi of Rome are the founders of the new periodical.

LONDON LETTER.

Death of Alexander Bain.

Alexander Bain, the celebrated philosopher, has died at his residence in Aberdeen. Though not a medical man, or even a biologist, his work in the realm of psychology can not be regarded as without importance from the merely professional standpoint. The evolutionary school has largely thrown much of his psychologic work in the shade, but some of it will remain an important and permanent contribution to science. His treatises may be described as "the last word" of the earlier stage of psychology, which proceeded in the main by introspective analysis of the individual mind. The principle of association so fruitfully applied by English philosophers from Hartley to John Stuart Mill received from Bain its fullest development and illustration in every region of mental experience. In insisting on the study of mental facts in connection with their physiologic conditions he was one of the pioneers of newer methods and he laid down the principle of psychophysical parallelism, which most psychologists now employ, at least as a working hypothesis. The stress which he laid on our active experiences of movement and effort was entirely original; and though his theory of a central innervation sense is no longer tenable in the form in which he stated it the investigations to which it gave rise have been an important factor in advancing our knowledge of the subject.

The Drinking of Methylated Spirit in Aberdeen.

In his annual report for 1902 Dr. Matthew Hay draws attention to the growing use in Aberdeen of methylated spirit as a beverage. The government has recently authorized the addition to methylated spirit of a small proportion of petroleum oil (3 to 800). It was thought that such a mixture would be too nauseous to drink. But this modification has failed to effect its purpose. The poorer and more degraded drinkers of Aberdeen take this altered spirit in an increasing degree. It is so cheap that for 2 cents the equivalent of 4 ounces of whisky can be obtained. The extent to which the trade is carried on is shown by the fact that as many as 70 men have been seen to enter a grocer's shop and purchase it for drinking in 2 hours. This spirit produces a state of stupor similar to that of opium poisoning.

Correspondence.

Dead Yet Speaketh.

St. Johnsbury, Vt., Oct. 12, 1903.

To the Editor:—I read my obituary notice, published in your last week's issue, with interest. As Mark Twain said of a similar occurrence: "The report was greatly exaggerated." I was injured in an automobile accident, and received fractures of each femur, dislocation of the left elbow and right shoulder and fractures of the nasal and superior maxillary bones. Aside from these I am all right and am getting on well with them.

John M. Allen.

Queries and Minor Notes.

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

MEDICAL BIOGRAPHY.

New York, Oct. 15, 1903.

To the Editor:—After carefully reading your grand editorial in the issue of August 15, on "The Value of Medical Biography to the Medical Student," I ask where I can secure (in English) Sir Michael Foster's Lane Lectures, "Masters of Medicine," and Rene Vallery-Radot's "Life of Pasteur"? S. H. Cassidy.

Ans.—Foster's book on the "History of Physiology," being the Lane Lecture of 1901, is published by the Macmillan Company, New York, price $2.25; "Masters of Medicine," by Sir B. W. Richardson, is published by Longmans, Green & Co., London and New York, price $1.25 per volume; "The Life of Pasteur," in two volumes, is published by McClure, Phillips & Co., New York, price $7.50. Any book house will order them if they are not in stock.

Marriages.

George H. Miller, M.D., to Miss Alice Lawler, both of Chicago, October 7.

Samuel J. McNeill, M.D., to Miss Amy E. Jackson, both of Chicago, September 9.

Clara Meltzer, M.D., to John Auer, M.D., both of New York City, October 1.

William J. Hammond, M.D., Boston, to Miss Edith Lewis, at Baltimore, October 7.

E. Norman Foster, M.D., to Miss Pearl Thomas, both of Pittsburg, Pa., August 20.

Charles W. Pfeiffer, M.D., to Miss Theresa Golm, both of Quincy, Ill., September 30.

W. M. French, M.D., Chicago, to Miss Mabel Shelton of Macon, Mo., September 24.

J. Wesley Graham, M.D, Jackson, Tenn., to Miss Crigler of Saybrook, Ill., October 7.

Van H. Wilcox, M.D., to Miss Margaret Caton, both of Minneapolis, Minn., October 6.

Alvah Childs Remington, M.D., to Anna S. Wilson, both Rochester, N. Y., September 30.

Seeber King, M.D., Lake Butler, Fla, to Miss Agnes V. O. Wilson, at Laurel, Md., October 7.

Philip E. Stockhardt, M.D., Elwood, Ind., to Miss Mabel G. Stout of Louisville, Ky., October 14.

Frederic H. Slayton, M.D., Clifton, Ariz., to Miss Louise Downing of Macomb, Ill., October 6.

A. Aronheim, M.D. Ghent, Norfolk County, Va., to Miss Hilda B. Kline, at Baltimore, October 8.

Roy S. Donaldson, M.D., Maywood, Ill., to Miss Elizabeth Wolfe Giles of Oak Park, Ill., October 12.

William Major, M.D., Aguas Calientes, Mexico, to Miss Maude Meacham of Eureka, Ill., October 7.

Chistle A. Miller, M.D., Sharpsburg, Iowa, to Miss Louie Dewees of Fontanelle, Iowa, September 16.

Harlan Page Mills, M.D., Sheridan. Mo., to Miss Maude Edith Benton, at St. Joseph, Mo., October 14.

Albert E. Brennen, M.D., Niagara Falls, N. Y., to Miss Mary McInnes Read, Niagara, September 29.

Henry Krone, Jr., M.D., Hamilton, Ohio, to Miss Grace Janet Seesloth of Richmond, Ind., October 21.

Andrew F. McBride, M.D., Paterson, N. J., to Miss Kathleen Galvin, in New York City, September 29.

Henry E. Haskins, M.D., Kingman, Kan., to Miss Bertha Knappenber of Penaloosa, Kan., September 18.

John W. Osborne, M.D., Rantoul, Ill., to Miss Gertrude Pitsenbarger of Champaign, Ill., September 23.

Robert Bland Grubbs, M.D., U. S. A., San Francisco, to Miss Alice Maude Eagan, at Washington, D.C., September 17.

Albert F. Caldwell, M.D., Shenandoah, Iowa, to Miss Emma Pierce of Boston, Mass., at Clarinda, Iowa, September 26.

Archibald Cameron Nash, M.D., Cleveland, Ohio, to Miss Clara Margaret Huddleston of Hartwell, Ohio, September 30.

Deaths.

JOHN BATES JOHNSON, M.D.

On October 6, Dr. John Bates Johnson, who was the first to receive the honor of being elected vice-president of the American Medical Association, died at his home in St. Louis, aged 86.

He was born at Fairhaven, Mass., April 26, 1817, and was graduated from Harvard University. He then went to Pittsfield, Mass., where he attended Berkshire Medical College and received his medical degree from that institution in 1840. He settled in St. Louis in 1841 and soon attained prominence. Two years after his arrival there he established the first public dispensary west of the Mississippi river and in 1840 he commenced his career as a medical teacher in the Kemper Medical College, which afterward became the Missouri Medical College. In 1850, when the American Medical Association was founded, he was one of its organizers and was made vice-president. He was also one of the founders of the Medical Association of the State of Missouri and served one term as president. In 1854 he was elected to the chair of principles and practice of medicine in the Washington University and con-

JOHN BATES JOHNSON, M.D.

tinued in this position for nearly half a century. At the time of his death he was professor emeritus of this branch.

During the Civil War he was prominent as a member of the United States Sanitary Commission and rendered signal service in raising funds and caring for the sick and wounded soldiers.

Dr. Johnson was one of the most honored and esteemed physicians of St. Louis and was one of the four veterans who, only a few months ago, were tendered a banquet by the medical profession of the city and state. He continued in practice and was in good health until a short time before his death, when acute kidney disease developed, for which an operation was unavailingly performed. He failed rapidly after this and died from uremia.

The St. Louis Medical Society held a special meeting, October 7, at which Dr. Johnson's personality and excellent qualities as a physician and man were eulogized. A committee was appointed to draw up resolutions expressive of his worth and of the society's loss in his death. The society voted to attend the funeral in a body.

David Franklin, M.D. University of New York, 1878, died at his home in New York City, October 6, from septic peritonitis after an operation for appendicitis, aged 48. He was a member of the American Medical, New York State Medical, New York County Medical and Harlem Medical associations and of the Bellevue Hospital Alumni Association. For twenty years he was house physician to the Hebrew Orphan Asylum. At a special meeting of the Harlem Medical Association, October 7, resolutions were unanimously adopted extolling the many noble traits of character of Dr. Franklin, who was once president of the association, and regretting his untimely death.

John W. Hulick, M.D. Medical College of Ohio, Cincinnati, 1882, member of the American Medical Association, American Association of Life Examining Surgeons, Ohio State Medical Society. Clermont and Clark County Medical societies, died at his home in Springfield, Ohio, October 4, from typhoid fever, after an illness of two weeks, aged 45. The Clark County Medical Society at a special meeting, October 5, listened to a brief sketch of Dr. Hulick's life, prepared by Dr. John P. Dugan, and adopted resolutions of regret and regard.

William C. Denman, M.D. Medical College of Ohio, Cincinnati. 1878, a member of the American Medical Association and of the Marion County Medical Society, died at his home in Marion, Ohio, October 1, from Bright's disease, after an illness of a few months, aged 52. The county medical society, at a special meeting called on the day of Dr. Denman's death, decided to attend the funeral in a body, and also adopted suitable resolutions of regret.

James Gamble, M.D. Medical Department of the University of Missouri, St. Louis, 1847, treasurer of the Iowa State Medical Society in 1857 and president in 1870, one of the oldest members of the Scott County Medical Society, assistant surgeon of the Third Iowa Volunteer Infantry in the Civil War, died at his home in Le Claire, Iowa, October 6, after an illness of only twelve hours, aged 82.

Virgil McDavitt, M.D. University of Louisville, 1850, formerly dean of the Quincy (Ill.) Medical College, and during the Civil War, surgeon of the First Alabama Cavalry, died at his home in Quincy, Ill., October 2, from septicemia caused by a prick from an instrument eighteen days before, aged 74. Members of the Adams County Medical Society acted as pallbearers at the funeral.

Sam C. Johnson, M.D. Long Island College Hospital, Brooklyn, N. Y., 1864, formerly president of the Wisconsin State Board of Medical Examiners; a member of the American Medical Association, American Public Health Association, Wisconsin State Medical Society, and the Inter-County Medical Society, died suddenly at his home in Hudson, Wis., October 17, from heart disease.

David Rector McKinney, M.D. Medical College of Indiana, Indianapolis, 1878, of Banquo, Ind., an old practitioner of Champaign County, Ill., and some-time president of the county medical society, who was injured by falling from a train near Fithian, September 17, died as a result of his injuries at the home of his son in Gifford, Ill., September 29, aged 66.

William Danderson Wood, M.D. Castleton (Vt.) Medical College, 1854, one of the organizers and for several terms president of the Queen's County Medical Society, and surgeon of the Eighty-ninth New York Volunteer Infantry in the Civil War, died at his home in Jamaica, L. I., October 4, aged 82.

Cornelius Shepherd, M.D. University of Pennsylvania, Philadelphia, 1861, a member of the American Medical Association, died at his home in Trenton, N. J., October 7, after a lingering illness, aged 66. He was active in establishing the present school system in New Jersey.

Joseph Hinson Mellichamp, M.D. Medical College of the State of South Carolina, Charleston, 1852, of Bluffton, S. C., surgeon in the confederate service during the Civil War, and an eminent botanist, died on James Island, S. C., October 3, after a long illness, aged 74.

Albert S. Amerman, M.D. University of Michigan, Ann Arbor, 1871, of Rockford, S. Dak., twice a representative in the legislature, a pioneer physician and gold-seeker in the Black Hills, died at Rapid City, S. Dak., October 6, from dropsy, after a long illness, aged 54.

William Johnson Dale, M.D. Harvard University Medical School, Boston, 1840, for 21 years surgeon-general of Massachusetts, and acting medical director U. S. Army during the Civil War, died at his home in North Andover, Mass., October 7, aged 88.

George Landerkin, M.D. University of the Victoria College, Cobourg, Ont., 1862, died at his home in Hanover, Ont., October 4, aged 64. He was elected to the House of Commons in 1873, and subsequently occupied a seat in the house from 1882 until 1896.

Chas. F. Goodrich, M.D. St. Louis Medical College, 1866, assistant surgeon in the Ninth Missouri Volunteer Cavalry and a member of the American Medical Association, died at his home in New Haven, Mo., September 25, from apoplexy, aged 66.

James Davis Gardiner, M.D. Columbus (Ohio) Medical College, 1879, one of the oldest practitioners of Illinois, died at the home of his daughter in Farmer City, Ill., from paralysis, after an invalidism of four years, September 28, aged 83.

Edward E. Stonestreet, M.D. University of Maryland, Baltimore, 1852, secretary of the Montgomery County Board of Health, died, October 9, from heart disease at his home in Rockville, Md., where he had practiced for 51 years, aged 73.

Benjamin F. Rivers, M.D. Howard University, Washington, D. C., 1902, house physician of the Charleston Hospital and Training School for Colored Nurses. died at the home of his father on James Island, S. C., September 25.

Charles Blackwell Sweeting, M.D. London College Hospital. 1867, of Key West, Fla., a member of the American Medical and the Florida Medical associations, died in Brooklyn, N. Y., October 4, after a lingering illness, aged 58.

John Polson, M.D., a member of the American Medical Association, Medical Association of the State of Missouri and Linn County Medical Society, died at his home in Laclede, Mo. October 13, from typhoid fever, aged 61.

Edwin N. McPheeters, M.D. Tulane University, New Orleans, 1903, interne at the Natchez (Miss.) City Hospital, died at the hospital, October 2, a short time after an operation for appendicitis, aged 21.

George W. Bowen, M.D. University of Pennsylvania, Philadelphia, 1872, a member of the Philadelphia County Medical Society, died at his home in Philadelphia, September 30, aged 56.

Lyman M. Willard, M.D. University of Pennsylvania, Philadelphia, 1870, was found dead in bed, September 29, at his home in Loomis, Wash., with a bottle of chloroform in his hand.

Wilson W. Stroup, M.D. University of Pennsylvania, Philadelphia, 1874, committed suicide by shooting himself with a revolver at his home in Harrisburg, September 30, aged 54.

Charles G. Bowers, M.D. Medico-Chirurgical College, Philadelphia, 1903. of Brooklyn, N. Y., fell from a train near Jersey City, September 26, and was drowned, aged 25.

Thomas V. Gifford, M.D. Hygeio-Therapeutic College of New York, 1863, a noted opponent of vaccination, died at his home in Kokomo, Ind., September 25, aged 72.

J. Walter Burch, M.D. University of Maryland School of Medicine, 1903, died from obstruction of the bowels, in Baltimore, October 2, aged 26.

William A. Evans, M.D. New York University, 1859, died October 8, from gunshot wounds accidentally received, at his home in Aberdeen, Miss.

Michael C. Kreitzer, M.D. Jefferson Medical College, Philadelphia, 1850, died from apoplexy at his home in Philadelphia, September 25, aged 77.

John T. Slaughter, Jr., M.D. Atlanta Medical College, 1879, of Villa Rica, died at Grady Hospital, Atlanta, October 3, from appendicitis, aged 51.

W. H. Russell, M.D., of Providence, R. I., died recently and was buried September 21, the pallbearers being brother physicians of Providence.

Lyman N. Mixer, M.D., an eclectic physician of Hastings, Mich., died. September 22, from paralysis, after an illness of one week, aged 75.

John R. Goodale, M.D. Eclectic Medical College of the City of New York. 1872. died at his home in Oakland, Cal., September 26, aged 67.

Franz F. A. Hoogen, M.D. Missouri Medical College. St. Louis. 1886. of St. Louis. died at his winter home in Helwan, Egypt. October 7.

Armand Derivaux, M.D. Faculty of Medicine, Paris. France, 1876. a veteran of the Franco-Prussian War. died at his home in St. Louis recently.

Jesse Taylor, M.D. Eclectic Medical Institute. Cincinnati, 1897. died at his home in Vermont, Ill.. October 2, after a short illness. aged 30.

Andrew Jackson McIntyre, M.D. University of Michigan, Ann Arbor, died from pneumonia at his home in Galatia, Ill., October 2.

J. Chester Pratt, M.D. Eclectic Medical College of the State of New York. 1891, died at Springfield, Mass.. October 5, aged 36.

Dominick F. Harang, M.D. Tulane Medical College. New Orleans. 1901, died at his home in New Orleans, October 5, aged 25.

James M. Brydon, M.D. Medical College of Indiana, Indianapolis, 1875, died at his home in Chicago. September 29, aged 59.

John D. Key, M.D. Bellevue Hospital Medical College, New York, 1885, died at Halfmoon Bay, Cal., September 24, aged 40.

James Nixon Butt, M.D. University of Pennsylvania. Philadelphia, 1855, died at his home in Orlando, Fla., September 29.

George K. Elder, M.D., of Kansas City, Mo., died at Toledo, Ohio, October 1, from dropsy complicated with asthma, aged 50.

James W. Akers, M.D., Jefferson Medical College, Philadelphia. 1876, died at his home in Curran, Ill., September 28.

A. M. Jackman, M.D. University of Louisville, 1874, died at his home near Kendall, Ky., October 3. aged 64.

William G. Montgomery, M.D., of Minden, Ont., died at Gorrie, Ont., September 8, aged 29.

George W. Henderson, M.D., died at his home in Waynesville, Ohio, September 27.

W. Frank Park, M.D., died at his home in Tracy City, Tenn., September 30.

Deaths Abroad.

Theophile Roussel, M.D., died at his country home at Mende, September 27, aged 87. He was venerated throughout France for his active and enlightened philanthropy, and especially as the author of the laws for the protection of children, nurslings boarded out, factory children and those abandoned and ill treated. He served for many years as senator from Lozère and on important committees. His eightieth birthday was the occasion of an ovation from the authorities and the public in general, the government presenting him with a gold medal. His published works on medical and hygienic subjects are numerous, his "Public and Private Charities" being the standard reference book on this subject.

A. Rollett, M.D., one of the most prominent physiologists of his day, died at Graz, October 1, aged 70.——**E. Pflueger, M.D.**, professor of ophthalmology at Berne, died September 28, aged 57.——**A. Regnard, M.D.**, "inspecteur géneral des services administratifs" at Paris, died September 28, aged 77.——**E. Boisseau, M.D.**, chief of the army sanitary service of France, died at Paris, September 25.

H. R. Pott, M.D., died at Halle, September 25, aged 59. He was born and graduated at Halle and has served there as professor of children's diseases since 1883. He was a frequent contributor to the medical press on subjects connected with internal medicine and pediatrics.

P. Goetsch, M.D., died at Slawentzitz, September 24. His report of the remarkable success obtained at the sanatorium in his charge by treatment of tuberculosis with long continued, minute doses of tuberculin, attracted much attention three years ago.

R. Landau, M.D., died at Nuremberg. September 21, aged 39. His name is well known by his numerous contributions to the medical press and his works on the history of medicine, especially his "History of Jewish Physicians."

F. Wuerth, M.D., died at Freiburg in September, aged 98. He had long been the oldest practicing physician in Germany, his medical degree dating from 1828.

Miscellany.

A Medical Museum.—Rush Medical College, Chicago, has established a museum in which will be preserved and exhibited permanently objects of interest and value in the history of medicine. Especial attention will be given obsolete instruments and appliances for the diagnosis and treatment of disease. Many physicians and others have instruments that perhaps even a short time ago were in use, but which have been laid away for more recent inventions; these are of historical value. Medicine in the United States has so brief a history that it should not be difficult to represent in this museum its complete development in the instruments and appliances that have come and gone, that have been of great value, but have given place to better inventions as the art has progressed. The late Professor Fenger bequeathed his own instruments to this museum, and it was the wish of this thoughtful man that his gift should be but the foundation for a collection that would show the development of the art he loved and for which he did so much. Rush Medical College has set aside a commodious room in the newly-opened Senn Hall for the permanent use of this museum. Gifts will be inscribed with the name of the donor, and any remarks as to their history, original owner, user, etc., that may increase their interest. All other objects that have any interesting relation to the history of medicine or to renowned physicians will be given place, such as original manuscripts, autograph letters, portraits, etc. Information may be had by addressing Rush Medical College, Chicago.

[Signed] Dr. F. Henrotin.
(Class of 1868.)

State Boards of Registration.

COMING EXAMINATIONS.

Louisiana State Board of Medical Examiners, Tulane Medical College Bldg., New Orleans, Oct. 26-27.
State Board of Examiners of Alabama, Montgomery, Nov. 1-10.
Oklahoma Medical Examining Board, Enid, Nov. 10.
Committee of the Connecticut Medical Society, City Hall, New Haven, Nov. 10.
Board of Registration in Medicine of Massachusetts, State House, Boston, Nov. 10-11.
State Board of Health of West Virginia, Point Pleasant, Nov. 10, 11, 12.
Nebraska State Board of Health, Lincoln, Nov. 11.
Board of Registration of Medicine of Maine, Augusta, Nov. 11.

District of Columbia Report.—The Board of Medical Supervisors of the District of Columbia, in their sixth annual report, say that they have decided, after long consideration of the subject, that reciprocity is impossible without an amendment of the law under which they operate. They announce plans for the prosecution of those who are practicing criminally, and those who are liable to a revocation of license for other reasons.

Ohio Reciprocity.—The State Board of Medical Registration and Examination of Ohio adopted the following resolution at its regular meeting, October 6, 1903:

> The Ohio State Board of Medical Registration and Examination will dispense with the examination of a candidate presenting a license from another state board, or from the Board of Examiners of the District of Columbia, issued after an examination on which a general average of 75 per cent. was obtained, on payment of the fee, $50, required by law; provided, the applicant was, at the time of such examination, the holder of a diploma from a medical college recognized as in good standing by the state board of Ohio, and provided that the applicant has complied in all other particulars with the laws of Ohio governing the practice of medicine and surgery and the rules of the Ohio State Board of Medical Registration and Examination, and provided that the state board issuing such license will, in like manner, accept the license issued by this board.

Book Notice.

A Text-Book of Obstetrics. By J. Clarence Webster, M.D. Edin., F.R.C.P.E., F.R.S.E., Professor of Obstetrics and Gynecology, Rush Medical College, in Affiliation with the University of Chicago. With 383 Illustrations; 23 in Colors. Cloth. Pp. 761. Price, $5.00. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

Webster has adopted a different arrangement from that usually found in works on obstetrics. He first considers normal pregnancy, normal labor, and the normal puerperium, then their pathology in the same order, followed by operative obstetrics. In part one, consisting of seven chapters, are considered the anatomy and physiology of pregnancy, bacteriology of the vagina, diagnosis, length of gestation, multiple pregnancy, false pregnancy and management of pregnancy. The first chapter on the anatomy and physiology of pregnancy is the most important from the scientific viewpoint. The theme is one on which the author is especially qualified to write, as it is one to which he has devoted much time in research and investigation. Naturally, therefore, we might expect to find all the latest scientific views and most recent established facts regarding placentation, etc. The author has not only given us these, but being thoroughly master of the subject, he is able to present the matter clearly and lucidly and in such a manner that the ordinary student can easily grasp and master it. This is especially noticeable in the discussion of the anatomy and physiology of the fetus. In the chapter on the bacteriology of the vagina in pregnancy is given, in brief, the results of the various experimental investigations and examinations of the vaginal secretions, and the author concludes that douching for prophylactic purposes either before or after confinement is unnecessary, unless there has been exposure to contamination. The subjects of diagnosis of pregnancy, length of gestation, and management of normal labor are considered fully and in every detail. In the five chapters of part two are considered the clinical phenomena, anatomy and physiology, and conduct and management of normal labor, together with asepsis and antisepsis and anesthesia. The chapter on the anatomy and physiology of normal labor is accompanied with illustrations that are especially to be commended, many of them being taken from frozen sections, and all being true to nature. As might be expected, the author is very insistent and emphatic regarding the value of asepsis in labor; but not too much so. He is not a faddist and his recommendations and suggestions are practical and can easily be carried out by every practitioner. The three chapters in part three are devoted to the management of the puerperium and the care of the new-born child. In part four—fifteen chapters—the diseased conditions complicating pregnancy are considered. Part five, composed of five chapters, is devoted to the various complications of labor; part six—three chapters—to the pathology of the puerperium, and part seven—six chapters—to operative work. Every subject is thoroughly covered and no detail, so far as we can find, has been omitted. The author recognized that thorough knowledge of the anatomic and pathologic changes that occur in pregnancy, in labor and in the puerperium is a necessary basis for a clear understanding of the various complications and conditions that are to be met in obstetric work, and consequently more than usual attention is given to these subjects. The work represents the most modern views—those that are based on proven facts; it is scientific in the best sense of the word, and at the same time it is practical. It is written for the scientific student and also for the general practitioner who does the major portion of obstetric work. In considering the management of complications and the treatment of conditions the directions are given with clearness and exactitude, and only those methods and remedies are recommended that have been proven. The illustrations are especially to be commended. While we miss many of the old reliable cuts that have done service for so long and in so many books, yet in their places are those more in accord—artistically and for practical use—with present-day knowledge and requirements. As a whole, the book represents as much of a step forward in the obstetric literature of our day as did the classic work of Lusk nearly a quarter of a century ago.

Medical Organization.

California.

Shasta County Medical Association.—Physicians of the county met at Redding, September 21, with Dr. Andrew W. Morton, San Francisco, trustee of the state society, and organized a county society to be auxiliary to the state organization. Dr. Olin J. Lawry was elected temporary president, and Dr. R. F. Wallace temporary secretary, both of Redding; Drs. R. F. Wallace, John M. Read and Joshua T. Rohn, all of Redding, were appointed a committee to complete the organization and to draft a constitution and by-laws.

Indian Territory.

Northern District Medical Society.—The physicians of the Northern District of the Indian Territory have organized with the following officers: Dr. Benjamin F. Fortner, Vinita, president; Drs. William T. Tilly, Pryor Creek, and Frank L. Wormington, Miami, vice-presidents, and Dr. Robert H. Harper, Afton, secretary and treasurer.

Indiana.

Vigo County Medical Society.—Dr. Myron A. Boor, Terre Haute, councilor for the Fifth District, met the Vigo County Medical Society at Terre Haute, October 1, and explained the plan of reorganization recommended by the American Medical Association. The society then adopted the standard constitution and by-laws.

Fountain County Medical Society.—On October 1 this society, one of the oldest in the state, met at Covington and reorganized, adopting the standard constitution and by-laws. Dr. Paul J. Barcus, Crawfordsville, councilor for the Ninth District, was present and aided in the reorganization. Dr. Charles J. Wert, Kingman, was elected president, and Dr. George Rowland, Covington, secretary-treasurer.

Iowa.

Muscatine County Medical Society.—This society made a complete reorganization, October 8. The charter membership was 20. Dr. Henry M. Dean was made temporary chairman, and Dr. Thomas F. Beveridge temporary secretary, both of Muscatine. The temporary organization was made permanent.

Sac County Medical Society.—Physicians of the county met at Sac City, October 6, and organized this society. The following officers were elected: President, Dr. Thomas Farquhar, Early; vice-president, Dr. William Y. Herrick, Lytton; secretary, Dr. Frank H. McCray, Schaller; treasurer, John H. Stalford, Sac City, and censors, Drs. Zachary Fuller, Sac City, John W. Graham, Early, and Andrew T. Brenton, Sac City.

Washington County Medical Society.—The annual meeting was held in Washington, October 8. Dr. Charles E. Ruth, Keokuk, councilor for the First District, was present and explained the plan of reorganization, and the society adopted a constitution and by-laws in accordance therewith. The following officers were elected: Dr. George W. Hay, Washington, president; Dr. Charles W. McLaughlin, Crawfordsville, vice-president; Dr. Clyde A. Boice, Washington, secretary and treasurer; Dr. Edward R. Jenkins, delegate to Iowa State Medical Society, and Drs. William E. Fordyce, Ainsworth, Emmett T. Wickham and J. C. Boice, Washington, censors.

Louisiana.

West Baton Rouge Parish Medical Society.—On October 1, six of the seven available physicians of the parish met at Devall, and organized a parish society with Dr. Franklin H. Carruth, Lobdell, president; Dr. James O. St. Dizier, Walls, vice-president, and Dr. H. Guy Riche, Devall, secretary-treasurer.

East Feliciana Parish Medical Society.—Physicians of the parish met in Wilson, October 3, and organized, with the assistance of Dr. John M. Barrier, president of the state society. Dr. S. L. Singletary, Wilson, was elected president; Dr. Aquippa Gayden, Norwood, vice-president, and Dr. E. C. McKowen, Jackson, secretary and treasurer.

East Baton Rouge Parish Medical Association.—Dr. J. M. Barrier, Delhi, president of the Louisiana State Medical Society, met the physicians of the parish at Baton Rouge, October 1, and organized a parish society with 12 members. The following officers were elected: Dr. James W. Dupree, Baton Rouge, president; Dr. George W. Sitman, Burtville, vice-president, and Dr. Charles McVea, Baton Rouge, secretary and treasurer.

Vermilion Parish Medical Society.—Dr. Milton R. Cushman, Abbeville, was chairman, and Dr. Clarence J. Edwards, Abbeville, secretary, of an informal meeting of physicians of the parish, October 3, at Abbeville, for the purpose of taking steps to reorganize in accordance with the plan proposed by the American Medical Association. It was resolved not to go into permanent organization until all the reputable physicians of the parish had been afforded an opportunity to participate. The meeting then adjourned until October 15.

North Carolina.

Cleveland County Medical Society.—Dr. Edward C. Register, Charlotte, organized a county medical society at Shelby, September 12.

Davie County Medical Society.—Dr. Thomas E. Anderson, Statesville, councilor for the Fourth District, met physicians of Davie County recently and organized a county society with Dr. M. D. Kimbrough, Mocksville, president; Dr. Robert L. Rierson, Cooleemee, vice-president, and Dr. W. C. Martin, Mocksville, secretary and treasurer.

Duplin County Medical Society.—Dr. Frank H. Russell, Wilmington, at Warsaw, October 2, organized a county society with the following officers: Dr. John M. Faison, Faison, president; Dr. A. N. Smith,, Magnolia, vice-president; Dr. Benjamin R. Graham, Wallace, secretary and treasurer, and Drs. J. W. Carroll, Wallace, James M. Williams, Warsaw, and Albert F. Williams, Kenansville, censors.

Columbus County Medical Society.—Dr. Frank H. Russell, Wilmington, on September 29, organized a county society whose membership is said to include every physician in the county. The following officers were elected: President, Dr. N. A. Thompson, Whiteville; vice-president, Dr. Samuel M. Withers, Chadbourn; secretary and treasurer, Dr. J. Clegg Hall, Boardman, censors, Drs. John M. McGougan, Cerro Gordo, David B. Jordan, Cronly, and Henry B. Maxwell, Whiteville.

Mecklenburg County Medical Society.—This society was organized at Charlotte, October 7, with an initial membership of 41, under the standard constitution. The following officers were elected: Dr. Harry Q. Alexander, Davenport, president; Dr. Annie L. Alexander, Charlotte, vice-president; Dr. Parkes M. King, Concord, secretary and treasurer; Drs. Walter P. Craven, Charlotte; I. Wellington Faison, Charlotte, and Theodore F. Pharr, Harrisburg, censors, and Drs. Edward C. Register, Calvin S. McLaughlin and F. O. Hawley, all of Charlotte, committee on public health and legislation.

North Dakota.

Sixth Judicial District Medical Society.—The physicians of the Sixth Judicial District organized at Bismarck with the following officers: Dr. Francis R. Smyth, Bismarck, president; Dr. G. E. Chamberlain, Bismarck, vice-president; Dr. Frederick B. Strauss, Glenullin, secretary-treasurer, and Drs. George A. Perkins, Dickinson, Gilbert B. Furness, Mandan, and Nels O. Ramstad, Bismarck, censors. A committee was appointed to draw up a constitution and by-laws conforming to the recommendations of the American Medical Association.

Ohio.

Henry County Medical Society.—On October 7, Dr. Julius H. Jacobson, Toledo, councilor for the Fourth District, organized at Napoleon a county society, with the following officers: President, Dr. Eugene B. Harrison, Napoleon; vice-presidents, Drs. Harry P. Haag, Liberty, and Ora L. Norris, Deshler; secretary and treasurer. D. Alfred E. H. Mearker, Napoleon, and censors, Drs. John Bloomfield, Napoleon, Samuel E. Miller, Florida, and James D. Archer, Holgate.

Texas.

Parker County Medical Association.—Dr. Charles E. Cantrell, Greenville, councilor for the Fourteenth (North Texas) District, organized this association at Weatherford, October 5.

Fannin County Medical Association.—Physicians of the county met at Bonham, October 5, and organized with Dr. John M. Neel, president; Dr. Carey A. Gray, vice-president, and Dr. Alvis B. Kennedy, secretary and treasurer, all of Bonham.

Bell County Medical Society.—On October 3, 39 physicians of Bell County met at Belton and organized on the standard plan with the following officers: Dr. Jacob M. Frazier, Belton, president; Dr. J. H. Payne, Holland, vice-president, and Dr. John M. McCutchan, Temple, secretary and treasurer.

Big Springs District Medical Association.—This has been organized at Colorado with the following officers: Dr. William H. Morrow, Dunn, Scurry County, president; Dr. Preston C. Coleman, councilor for the Second District, Colorado, vice-president, and Dr. Willis R. Smith, Colorado, secretary and treasurer.

Wisconsin.

Price County Medical Society.—Dr. John M. Dodd, Ashland, councilor for the Tenth District, organized a county society at Phillips.

Monroe County Medical Society.—Physicians of the county met at Sparta, October 6, and organized under the standard constitution. The following officers were elected: President, Dr. George R. Vincent, Tomah; vice-president, Dr. Crawford E. Phillips, Wilton; secretary and treasurer, Dr. Carl M. Beebe, Sparta; delegate to the Wisconsin State Medical Society, Dr. Wilbur T. Sarles, Sparta, and censors, Drs. Jacob J. Simonson, Tomah, Cornelius H. Cremer, Cashton, and Fred P. Stiles, Sparta.

Society Proceedings.

COMING MEETINGS.

Congress of State and Provincial Boards of Health of North America, Baltimore, Oct. 23-24.

American Public Health Association, Washington, D. C., Oct. 26-30.

Hawaiian Territorial Medical Society, Honolulu, Nov. 7.

Oklahoma Territory Medical Association, Oklahoma City, Nov. 11.

Southern Surgical and Gynecological Association, Birmingham, Ala., Dec. 15.

Western Surgical and Gynecological Association, Denver, Dec. 28-29.

PENNSYLVANIA STATE MEDICAL SOCIETY.

Fifty-third Annual Meeting, held at York, Sept. 22 to 24, 1903.

(*Continued from page 982.*)

Is Registration and Disinfection a Successful Method of Combating Pulmonary Consumption?

Dr. Thomas J. Mays of Philadelphia read this paper at the second session of Section A, Wednesday afternoon, September 23. He gave an elaborate array of statistics and concluded that thus far registration and disinfection do not appear to be a success in combating consumption.

Dr. Lawrence F. Flick, Philadelphia, in speaking on "The Prevention of Tuberculosis," called attention to the fact that many deaths formerly accorded to bronchitis, inanition, etc., are now recorded strictly under the tables they should be, because there is a clear diagnosis of tuberculosis and not of pneumonia or of bronchitis.

The Specific Treatment of Tuberculosis.

Dr. Mazyck R. Ravenel, Philadelphia, reviewed the attempts made to discover a specific against tuberculosis. He believes that past results justify the strongest hope that the immunization of man against tubercle bacillus may be realized in the near future.

Trauma and Phthisis.

Dr. William T. English, Pittsburg, read a paper on "Trauma as an Etiologic Factor in Phthisis Pulmonalis." He believes that passive predisposition is often rendered active by the intervention of traumatism, and states that injury awaits the thorax and contained organs from the period of formation *in utero* throughout all independent existence, and that resulting traumatism has the power to produce phthisis pulmonalis, or to make more favorable the soil for tubercular deposit. The author emphatically declares that it is unfair to withhold sick benefits and remuneration for accident from those who develop phthisis pulmonalis after injury. Out of 128 cases in injury followed by traumatic pneumonia the writer finds that about 63 per cent. were associated with fracture. The conclusion seems justified that over 48 per cent. of those recovering from the immediate results of the injury and pneumonia developed pulmonary phthisis.

Discussion on Tuberculosis.

Dr. Lawrence F. Flick said he thought it would be a little bit dangerous in the sense of equity to conclude that because a person has developed tuberculosis which has been preceded by traumatism that he is entitled for damages in a suit for damages. He is of the opinion that there has been previously the implantation of the disease. He also thought that the statistical tables presented by Dr. Mays were exceedingly misleading. The mere fact of an increase in the death rate of tuberculosis means nothing unless all other factors are excluded.

Dr. M. V. Ball inquired whether Dr. Flick would advise the establishment of sanatoria in a county such as his, one of the very dampest, and thus deprive the patients of seeking a more favorable climate.

Dr. Alexander R. Craig said that in sanatoria under the management of the Massachusetts State Board of Health, in spite of the fact that the country is damp and the land is somewhat low, the results shown in the work are extremely gratifying. He assumed that there were many in Warren County who could not get out of their own county, and that it was better to give them the benefit of a sanatorium.

Dr. A. C. Wentz, Hanover, said that the majority of the profession must first learn to recognize a tubercle bacillus before they can decide when a man shall go to such and such a place for his health.

Dr. Mays said that he believed that no more blunders occurred twenty years ago than occur now in physical diagnosis of lung diseases. Notwithstanding that New York has followed the methods of disinfection and registration, Dr. Mays stated his statistics show that in New York the death rate from pneumonia has been the highest in the last ten years of any city or locality. The death rate of phthisis, consumption and tuberculosis has diminished in New Jersey and in Washington in the last fifteen or twenty years, but in these places there has not been registration or disinfection.

Dr. Flick called attention to the death rate of pneumonia in children referred to by Dr. Mays, and stated that ten or fifteen years ago nearly all deaths from lung disease in children were recorded as bronchitis, while now they are known as pneumonia. This is also true concerning the death rate of old age. This has been the cause of the increase of the death rate of pneumonia.

Committee on School Text-Books.

The report of the committee appointed to examine school text-books, which is given above (page 925, October 10) was, after much discussion, laid on the table and a new committee of five was appointed to continue the work of examination and scientific comment on the text-books of physiology and hygiene used in the public schools of Pennsylvania.

Family Periodic Paralysis.

Dr. George F. Holtzapple, York, read a paper by this title at the third session of Section A, Thursday morning, September 24. He gave a history of the affection as he had seen it in a family extending through four generations. Of the family of which the author writes a number have died in an attack. The cases were minutely described, and their characteristic symptoms and clinical phenomena correspond to those of cases previously observed by European and American investigators. The author believes that a postmortem would doubtless reveal much explanatory of the pathology. Personally he regards the condition one of vasomotor neurosis affecting the blood supply to the anterior horns which are almost wholly supplied by the anterior spinal artery. Believing that the attacks of hemicrania and paralysis in this family have a common cause and assuming that both conditions are a vasomotor neurosis, large doses of bromids with caffein were used, repeated in one or two hours if necessary. Prophylaxis he regards as an important matter in some cases. With a view to making a decided impression on the nervous system only large doses of bromids have been used.

Case of Cerebral Thrombosis with a Skiagraph Showing the Area of Softening.

Drs. Charles W. Burr and G. E. Pfahler, Philadelphia, described the case of a woman 67 years of age who had had a stroke 30 years before, resulting in a right-sided hemiplegia and aphasia. Although she had complete motor aphasia, word blindness and agraphia, word deafness was not complete. The auditory speech center, however, was completely destroyed. There was some word deafness. Dr. Pfahler had made a skiagraph postmortem, having replaced the brain for the purpose. The picture showed many of the normal contents of the skull and the area of softening. Stress was laid on the fact that in interpreting skiagraphs little dependence could be placed on the results, unless the normal structures came out well. If they failed to be shown appearances seemingly abnormal might be so or not. The value of skiagraphy in the differential diagnosis of hemorrhage and thrombosis from hemiplegia occurring in uremia without any gross cerebral lesion, was considered.

DISCUSSION.

Dr. Pfahler said that Dr. Charles K. Mills had reported three cases of brain tumor in which the skiagraphic report was confirmed by operation. One was of unusual interest from the fact that it was a gumma and was only about half an inch in thickness. The shadow shown corresponded exactly in size, shape and location with the gumma removed.

(To be continued.)

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Twenty-ninth Annual Meeting, held at Memphis, Oct. 7 to 9, 1903.

(Continued from page 982.)

This meeting was held under the presidency of Dr. Edwin Walker, Evansville, Ind. His president's address on the conduct of the practice of the general practitioner will be published in The Journal. The meeting was a great success from a scientific standpoint, although the attendance was no larger than usual. The papers were of unusual merit and were of practical value to the practitioner, establishing a standard perhaps higher than that of any previous meeting. The long discussions on the much-fought-over points in pneumonia and appendicitis treatment were lacking and the other papers were actively discussed. The social side of the meeting included an old southern barbecue, a reception and ball, a trolley party and other events and made this feature of the meeting one of unusual pleasure to all.

The Decision to Operate.

Dr. Ap Morgan Cartledge, Louisville, Ky., in the address in surgery, said that the physician or surgeon who decides that an operation should be performed should be keenly alive to the alarm and perturbation his announcement would cause to both patient and friends. Therefore, he should be prepared to make such announcement with the greatest clearness and candor, mingled with as much encouragement and hope as the condition would justify. He sounded a note of warning against the too common practice of treating surgical operations as trivial affairs, free from danger and pain.

The following four papers, which were read, will be published in The Journal: "The Causes of Occasional Failure of Operation to Cure Gallstone Disease," by Dr. W. J. Mayo, Rochester, Minn.; "Penetrating and Perforating Gunshot and Stab Wounds of the Abdomen," by Dr. John Young Brown, St. Louis; "The Importance of Medical Organization in Securing and Enforcing Medical Laws," by Dr. T. J. Happel, Trenton, Tenn.; and "Treatment of Tubercular Joints," by Dr. David C. Peyton, Jeffersonville, Ind.

The Prevention of Heart Disease.

This was the subject of the address in medicine by Dr. Robert H. Babcock, Chicago. He regarded the removal of all chronically diseased tonsils as of the utmost importance in all persons who had had once an attack of inflammatory rheumatism, whether the heart had been damaged or not. The physician should guard against the results of syphilis, gonorrhea, pneumonia, chorea, scarlatina, influenza, diphtheria, overstrains and toxic affections, constantly bearing in mind the liability to cardiac mischief.

Medical Organization.

Dr. J. N. McCormack, Bowling Green, Ky., stated that it was only a question of time when every state society in the Union would adopt the plan of reorganization of the American Medical Association. The results thus far accomplished are very encouraging. Within the last two years progress has been very rapid in many states. For instance, in Michigan the membership of the state society within one or two years has increased from 490 to almost 2,100 members; in Kentucky from less than 400 to nearly 1,600. Dr. McCormack urged physicians to establish pleasant relations with one another. With this idea in view every physician in the United States should begin to do good, and soon personal bickerings would be at an end.

Relation of the Medical Department of the United States Army to the Profession.

Major W. C. Borden, U. S. A., Washington, D. C., delivered an address on this subject. The medical department of the United States Army is recruited from all parts of the United States, and is, therefore, in a way representative of the medical profession of the country. Men from all prominent medical schools and hospitals are found in its ranks. The standing and efficiency of the medical department are of importance to the medical profession, not only as it is in part representative of that profession, but also from the important relation which it bears to the efficiency of the Army as a whole, and, therefore, the interests of the nation at large.

The ranking of medical officers below that of officers of other staff departments is distinctly derogatory to the dignity of the profession, and the profession at large should see that the medical department of the Army receives due recognition.

Only by mutual assistance and support can the profession attain its highest end. This is true of the various professional societies and of the medical departments of the Navy, the Army and the Public Health and Marine-Hospital Service.

In the past the relationship between the officers of the medical department of the Army and the profession at large has always been close, and thereby the officers of the medical department have kept in touch with the great advances in medicine and surgery which the civil practitioner in time of peace has the greatest opportunity to practice. In return, in time of war the civil practitioner called into the military service has to look to his brother in medicine, who has spent his life in the military service, for those details of medico-military work on which the efficiency of an army depends, and by which sickness and suffering may be prevented or alleviated under war conditions. At all times, therefore, greatest good to the greatest number and the best interests of the nation demand that the most cordial relationship, association and unity of endeavor obtain between the medical department of the Army and the profession at large. With this in mind, community of interest, mutual support, and work toward the common good of our fellows and our country will increase.

Hypodermatic Use of Mercury in Syphilis.

Dr. S. P. Collings, Hot Springs, Ark., said that the use of this method should be largely confined to cases in which there was a necessity for the patient to be brought rapidly under the influence of mercury.

Specialism in Its Modern Significance.

Dr. Albert B. Hale, Chicago, said that no real dividing line separates the branches of medicine, but modern specialism means time to devote to the delicate technic of diagnosis and of treatment. If these functions are not recognized for the patient's good, but if every practitioner accepts cases on which to practice, even when not equipped, the advance of true specialism is discouraged.

The Early Diagnosis of Mental Diseases.

Dr. C. B. Burr, Flint, Mich., outlined the differential diagnosis of many conditions. Self-deception on the part of the physician or inaccuracy in diagnosis leads to improper methods of management. The prescription of travel often made for neurasthenics was deplored and hospital care was advised.

What a General Practitioner Should Do in the Early Stages of Mental Disease.

Dr. Brooks F. Beebe, Cincinnati, said that the great progress in the treatment of mental diseases is a result of the recognition that psychology rests on physiologic bases, and metaphysical theories no longer have weight. In the treatment of mental diseases the intelligent physician should proceed in the same way as in treating other affections.

Masked Epilepsy.

Dr. W. B. Fletcher, Indianapolis, said this disease, usually unrecognized until it had progressed to a degree dangerous alike to the patient and those about him, presented one of the most intricate medicolegal questions. Little is known of the pathology. Among adults it is usually caused by alcoholic, syphilitic and autotoxic conditions. Treatment should begin with the mildest symptoms and war be waged on the vicious constitutional tendencies.

Local Lesions and Treatment of Amebic Dysentery.

Dr. James P. Tuttle, New York City, said that the value of flushing the bowel with cold water had been repeatedly proven. Flushings were given three or four times a day from a fountain syringe, in winter using water direct from a hydrant, in summer adding a little ice. At least one douche a day was continued for eight weeks. Treatment of rectal ulcers should be carried on according to requirements. A summary of the author's experience was: Total cases treated, 63; cured, 61; disappeared, 1; abscess of liver, 1; died, none.

Neuroses of the Stomach and Intestines.

Dr. Frank P. Norbury, Jacksonville, Ill., read this paper and emphasized that the background of all was the neuropathic constitution. By using the methods which best combat this feature, and which best subserve the observation of the case and the carrying out of the details of treatment, e. g., the rest treatment, and by studying each case with the consideration of all etiologic factors, the results will be found highly satisfactory.

The Principles of the Diagnosis of Medical Malingering.

Dr. John Punton, Kansas City, discussed this subject in a very exhaustive and interesting paper. He narrated the case which he described in the *Kansas City Index-Lancet*, July, of which an abstract appeared in The Journal, Aug. 1, page 338, No. 69.

Infantile Paralysis; Its Nature and Treatment.

Dr. Albert E. Sterne, Indianapolis, said this was essentially an infectious disease, and was regarded by some authors as the purest form of a true nerve tissue process. Unless epidemic, diagnosis was almost impossible before there was evidence of spinal involvement manifested. When the child first became ill, almost all symptoms pointed to an affection of the stomach, usually a couple of days before paralysis set in. If evidences of profound nervous involvement were found, associated with vomiting, it should serve as a diagnostic and prognostic warning. Counter-irritation should be used along the spine, antiphlogistic applications, and the constant use of dry cold to the vertebral column. Perfect rest should be maintained. No specific is known.

Dr. A. C. Wiener, Chicago, in a paper on the same subject, said that, after nine months had elapsed, any therapeutic attempt was futile. Good functional results were obtained by a brace which would put the paretic muscles of the leg at an advantage over the stronger opponents. The permanent restoration of the balance of two opposing muscle groups might be effected in two ways: First, by implantation of the paralyzed tendon into a normal one of similar function. Second, splitting off a part of the belly of a healthy muscle with its tendon and connecting it with the tendon of a useless muscle. The greatest usefulness of tendon grafting would be found in the frequent cases of infantile cerebral paralysis.

Syphilitic Manifestations in the Nose and Pharynx.

Dr. Paul Turner Vaughan, Hot Springs, Ark., spoke of the rarity of a primary sore in either of these localities. The primary sore should be cleansed with some antiseptic wash and dusted with some mild powder. Calomel is the best he has found. Locally caustics do harm in this stage.

The following papers were also read:

"Surgery of the Thyroid, Historical and Experimental, Illustrated with One Hundred Stereopticon Slides," by Dr. B. Merrill Ricketts, Cincinnati; "Dysmenorrhea" (treatment of nasal cocainization), by Dr. Emil Ries, Chicago; "Therapeutic Value of Heat and Cold Applied to the Spinal Cord," by Dr. W. Frank Glenn, Nashville, Tenn.; "Brain Strain Dyspepsia," by Dr. C. H. Hughes, St. Louis; "Scarlet Fever," by Dr. J. M. Batten, Huntington, Pa.; "Diabetes," by Dr. A. C. Croftan, Chicago; "Leukemia," by Dr. W. B. Burns, Memphis; "Castor Oil in the Treatment of Typhoid Fever," by Dr. C. C. Bass, Columbia, Miss, (adding 47 more to the 32 cases already reported); "Chronic Intestitial Nephritis," by Dr. R. Alexander Bate, Louisville, Ky.; "The Use and Abuse of Fresh Air and Over-Feeding in Tuberculosis," by Dr. W. H. Prioleau, Asheville, N. C.; "Cyclical Albuminuria" (reporting two interesting cases), by Dr. Arthur R. Elliott, Chicago.

(To be continued.)

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Gastric Ulcer.

According to an article in *Amer. Med.*, in cases in which there is free hydrochloric acid present in excess, bismuth must be given in 30-gr. (2.00) doses three times a day at a time when the stomach is as nearly empty as possible or one dose of 2½ drams (10.00) may be given every morning one hour before any food has been taken. Silver nitrate is valuable in mild cases, especially when hyperesthesia of the stomach is present with intolerance of food, and in chronic gastric ulcer when there is hypochlorhydria or achylia. It acts by producing a thin film of coagulated albumin over the inflamed mucous membrane around the sore. If pain is persistent after the treatment has begun, orthoform should be given in 5-gr. doses (.30) once or twice a day, which will give prompt relief. Patients suffering from chronic gastric ulcer should be kept on liquid food until the ulcer heals or when the epigastric tenderness has disappeared.

Welch, as noted by *N. Y. and Phil. Med. Jour.*, states that the treatment consists in: 1, rest in bed; 2, absolute rest for the stomach until improvement occurs; 3, symptomatic medication. The patient's strength must be cared for, and by giving the stomach complete rest healing is promoted and the tendency to vomiting, pain and hemorrhage decreased. So the patient must be nourished by rectal alimentation. The bowel must be flushed out one hour before the nutritive enema is given, with a pint of normal saline solution. When the rectal feeding is first given the food should be started in small doses and not oftener than once in eight hours. Iron, when anemia is present, may be given with the enemata. The following preparations are recommended as easily assimilated by the bowel: Defibrinated blood in amounts of 5 or 6 ounces at a time or somatose one teaspoonful; two eggs added to four ounces of peptonized milk. This method of feeding should be continued for ten days or two weeks. As to the treatment of the symptoms, thirst is controlled by the enemas and in addition small pieces of cracked ice may be given cautiously by the mouth. Pain and vomiting can often be relieved by external applications of the following mixture:

℞.	Spts. chloroformi	℥i	30
	Alcoholis	℥iii	90

M. Sig.: Apply locally to the epigastric regions on flannels. In cases of obstinate vomiting the following is recommended:

℞.	Sodii bromidi	gr. lxxx	5
	Ext. cannabis indicæ	gr. ss	03

M. Ft. pulvis No. i. Sig.: To be dissolved in three or four ounces of water and administered by the bowel.

The hemorrhage which occurs in about one-half of all the cases is controlled by twenty to thirty drop doses of equal parts of turpentine and egg albumin. And for the collapse due to hemorrhage flooding the colon with salt solution and strychnin and digitalis hypodermically will be of use.

For the hemorrhage gelatin may be given internally in tablespoonful doses of a 5 to 10 per cent. solution every 3 or 4 hours or given hypodermically in weaker solutions. Adrenalin is also recommended given 10 to 15 drops of a 1-2,000 solution three or four times a day. Morphin may be resorted to in stubborn cases and even operation if perforation of the stomach wall should occur.

Leube recommends the following to relieve the pain in gastric ulcer:

℞.	Codeinæ phos.		
	Ext. belladon., āā	gr. v	30
	Bismuthi subcarb.	ʒi	4
	Sacch, lactis	ʒi	4

M. Ft. chart. No. xv. Sig.: One powder two or three times daily.

The following combination is recommended by Hare to relieve the pain and to promote healing:

℞.	Argenti nitratis	gr. iv	25
	Ext. hyoscyami	gr. x-xx	65-1.30

M. Ft. pil. No. xx. Sig.: One capsule twenty minutes before each meal.

In the treatment of gastric ulcer the following combination is recommended by *Columbus Med. Jour.*:

℞.	*Picrotoxin*		
	Morph. hydrochlor., āā	gr. i	06
	Atropinæ sulph.	gr. 1/5	013
	Ergotin	m. xx	1 30
	Aq. laurocerosi	ʒiii	12

M. Sig.: Four to six drops ten minutes before each meal.

The following is also recommended:

℞.	Argenti nitratis	gr. v	30
	Tinct. opii	ʒiss	6
	Aquæ anisi q. s. ad	℥iiss	75

M. Sig.: One teaspoonful three times a day before meals.

Calcium Chlorid as a Hemostatic.

Bartignon, in the *Courier of Med.*, advises the employment of calcium chlorid as a hemostatic in hemorrhages from whatever source, in diseases presenting hemorrhagic tendencies, and especially in hemophilia. According to the author it surpasses in efficiency perchlorid of iron, antipyrin, ergotin, and at the same time is better tolerated by the stomach. He prescribes it as follows:

℞.	Calcii chloridi (crys.)	ʒi	4
	Syr. opii	℥iii	90
	Aquæ	℥iv	120

M. Sig.: This amount to be taken in twenty-four hours and renewed so long as the hemorrhage continues.

Terpen Hydrate.

The following methods of prescribing terpen hydrate are recommended by *Rev. francaise de Med. et de Chir.*:

℞.	Terpen hydratis	gr. 3/4	05
	Terebenthinæ (Venice) q. s.		

M. Ft. pil No. i. Sig.: One such pill four or five times daily; or:

℞.	Terpen hydratis		
	Sodii benzoatis, āā	gr. 3/4	05
	Ext. aconiti	gr. 1/65	001

M. Ft. pil. No. i. Sig.: Four to six such pills daily.

Phosphaturia.

According to an abstract in *Amer. Med.*, phosphaturia is nearly always associated with some dyspeptic disturbance. The treatment of this condition is rest and the regulation of the diet. Beef bouillon, eggs, brains, sweetbreads, fish, oysters, peas, lentils, turnips, celery and beans. The nitrogenous foods are generally diminished while the green vegetables and fruits are increased. In phosphaturia due to gout, the patient may be instructed to take a teaspoonful of the following for fifteen days three times a year:

R.	Sodii et pot. tartratis	℥iii	90
	Sodii bicarb.	ʒv	20

M. Sig.: One teaspoonful in water daily on an empty stomach.

In phosphaturia resulting from overwork, lecithin alternated with arsenic is advised. Lecithin may be given in three-grain doses three times a day for ten days, followed by the following combination, which should be taken for twenty days:

℞.	Sodii arsenatis	gr. i	06
	Aq. destil.	℥x	300

M. Sig.: One dessertspoonful before breakfast and dinner.

Cod-liver oil is recommended, giving one or two teaspoonfuls three times a day. A combination of calcium glycerophosphate and the glycerophosphate of iron may be substituted for the lecithin in anemic individuals.

Rheumatism.

L. G. Doane, in *Med. Bul.*, recommends the following combinations in the treatment of chronic rheumatism:

℞.	Acidi salicylici	ʒiii	12
	Ext. pruni virg. flu.	ʒii	8
	Ext. gentianæ flu.	ʒi	4
	Elix. simplicis	℥v	150

M. Sig.: One teaspoonful every three hours; or:

℞.	Ext. taraxaci flu.	ʒiii	12
	Ext. pruni virg. flu.	ʒii	8
	Ext. glycyrrhizæ flu.	gtt. ivss	25
	Elix. simplicis	℥v	150

M. Sig.: One teaspoonful every three hours.

Syrup of the Iodid of Iron.

The value of the iodid of iron as a remedy and its range of usefulness is recalled by M. D. Hodge in *Cin. Lancet-Clinic.* The preparation should, as a rule, be given alone and well diluted after meals. The dose may range from five to sixty drops, as desired. He especially calls attention to its value:

1. In the early stages of phthisis, given in one-dram doses three times daily. It promotes secretion, acts as a diuretic slightly, and the weight of the patient increases.

2. In dry, rasping coughs of bronchitis it will soon relieve the congestion and increase the expectoration after the ordinary cough syrups have failed.

3. In amenorrhea and dysmenorrhea, in scrofulous women especially, it is of special benefit, the menstrual flow often being properly regulated. The dose in such cases should range from twenty to thirty drops after each meal.

4. In anemic individuals suffering from chronic rheumatic gout it is of service given in doses of one dram, combined with cod-liver oil.

5. In constitutional syphilis it is a valuable remedy.

6. In children with a strumous diathesis, enlarged cervical glands associated with catarrhal conditions of the throat, and enlarged tonsils, it should be given, administered in ten-drop doses three times a day. It produces marked alterative effect, hastening absorption and reducing the swollen glands and at the same time increasing the hemoglobin.

7. In cases of delayed resolution following croupous pneumonia it is a splendid reconstructive and tonic.

8. In the incontinence of urine in children it serves a good purpose given in twenty or thirty drop doses in water after meals.

Shoemaker recommends the following combination in the treatment of chronic bronchitis and pleurisy:

℞.	Pot. iodidi	ʒiv	15
	Syr. ferri iodidi		
	Glycerini, āā	℥iss	45

M. Sig.: One teaspoonful in water or milk after each meal.

Medicolegal.

SOME LEGISLATION OF THE YEAR 1903.

California—Requires License for Vending Drugs, Etc.—Chapter CCXXXIII of the Statutes of California of 1903 provides that no person, as principal or agent, shall conduct as an itinerant vendor the business of selling drugs, nostrums, ointments or any appliances for the treatment of disease, deformities or injuries, without a license. An annual fee of $200 is charged.

Arkansas—Provision for County Boards of Health.—Act 42 of the Acts of Arkansas of 1903 provides that the several county judges may appoint county boards of health for their respective counties to be composed of three physicians authorized to practice medicine in the state. A majority of the board shall be sufficient to make any order or perform any duty provided for in this Act. The board is authorized to order the seclusion or the isolation of any persons, and any person who shall fail or refuse to obey the order, and who shall be found exposing himself in such a way as to transmit any contagious or epidemic or dangerous disease, shall, on conviction, be fined from $10 to $100, and may be imprisoned in the county jail not exceeding ten days.

California—To Regulate Practice of Optometry.—Chapter CCXXXIV of the Statutes of California of 1903 makes it unlawful to practice optometry without having obtained a certificate of registration from the board of examiners which the statute creates and having filed such certificate with the county clerk. The practice of optometry is defined as the employment of subjective and objective mechanical means to determine the accommodative and refractive states of the eye and the scope of its functions in general. An examination is required before the board, to be confined to such knowledge as is essential to the practice of optometry. Each succeeding year the certificate may be renewed for a fee of $2. The board may revoke any such certificate for conviction of crime, habitual drunkenness for six months immediately before a charge to be made, gross incompetency, or contagious or infectious disease. The act specifies that it does not apply to physicians, etc., authorized to practice in California, nor to persons who sell spectacles in the ordinary course of trade, and who do not employ mechanical means to determine the states of the eye as defined above.

California—Relative to Maternity Hospitals, Etc.—Chapter CCXXXIX of the Statutes of California of 1903 provides that any person who, without first having obtained a license in writing from the county health officers, conducts any maternity hospital, or who conducts any institution or other place for the reception or care of children, or who keeps at any such place any child under the age of 12 not his relative, apprentice or ward, without legal commitment; or who violates the provisions of this act, is guilty of a misdemeanor. Every such license must specify the name and residence of the person so undertaking the care of such females or children and the location of the institution and the number of females or children allowed to be received. Licenses shall be revocable for any violation of the provisions of the act, or in any case where, in the opinion of the licensing body, such place is being conducted without proper regard for the health, comfort or morality of the inmates thereof, or without due regard for proper sanitation or hygiene. Every person so licensed must keep a register of the names and addresses of all such females, the names and ages of all such children and of all children born on the premises, and the names and residences of their parents, so far as known, and the time of the reception and discharge of such children and the reasons therefor, and also the name and age of every child who is adopted or taken away, together with the name and residence of the person taking away the child; and within forty-eight hours shall cause a correct copy of the register relating to a child who is taken out to be sent to the county board of health or county health officer, as the case may be. It shall be lawful for all health officers, at all reasonable times, to enter and inspect the premises, to inspect the license and the register and to see and visit the inmates.

Arkansas—Against Unprofessional and Immoral Conduct.—Act 178 of the Acts of Arkansas of 1903 provides (Section 1) that any physician, surgeon or person practicing medicine who shall employ any solicitor, or drummer, or shall subsidize or employ any hotel or boarding-house, or advertise his business or remedies by untruthful or improbable statements, circulars or cards, or who shall obtain any compensation by any assurance that a manifestly incurable disease is curable, or who shall wilfully expose any professional secret learned from his patient, to the detriment of the patient, or who shall become a habitual drunkard and continue the practice of medicine, etc., or who shall administer any medicine or perform any operation while drunk, shall, on conviction, be punished by a fine of from $25 to $200, and by a revocation of his license. Section 2 provides that whenever any practitioner shall be convicted of any misdemeanor, involving moral turpitude, in addition to any other penalty shall be added a revocation of his license. Section 3 provides that if any practitioner shall commit the crime of abortion, or aid therein (provided this section shall not apply to any abortion produced by any regular practicing physician to save the mother's life) he shall be adjudged guilty of a felony and punished by imprisonment in the penitentiary for from one to five years, and his license shall be revoked. Section 4 provides that any practitioner whose license is thus revoked may appeal, but shall not practice pending the appeal, and that if he does so practice, or attempt or offer to do so, he shall be punished in the same manner and to the same extent as if he had never had any license to practice. Section 5 provides that after one year from the date of the revocation of his license for these causes a practitioner may ask for and receive a new license, if he shall satisfy the board that he is qualified, has reformed and is worthy.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal.

October 10.

1 *The Electrothermic Angiotribe in the Removal of Hemorrhoids. A. J. Downes.
2 *On a Certain Form of Xanthoma or the "Mushroom Growth." W. Moser.
3 *The Dangerous Operation of Uterine Curettement. Ely Van de Warker.
4 *Sterility from Obstruction at the Epididymis Cured by Operative Means. Edward Martin.
5 Transient *Postconvulsive* Astereognosis in Jacksonian Epilepsy. Charles W. Burr.
6 *Edebohls' Operation of Decapsulation of the Kidney for the Cure of Chronic Bright's Disease and the Indications for Its Performance. James Tyson.
7 Stillbirth *Due to Strangulation*. J. Milton Mabbott.
8 The Treatment of Delirium Tremens. (To be continued.) J. R. Clemens and others.

1. **Hemorrhoids.**—Downes describes his electrothermic angiotribe and points out its advantages over Skene's instrument. He describes the technic of removal of hemorrhoids by this method, dilating the sphincter, using his self-acting anal speculum to expose the areas, seizing the pile area by a suitable narrow-bladed forceps so as not to encroach on the area to be included within the grasp of the angiotribe, then introducing the latter well oiled to crush the pile as near to its base as possible. The shield is then carefully applied and the proper current connected by attaching the cable to the poles near the proximal end of the healing blade. In twenty seconds, he says, it will be noticed that the tissues in the grasp of the blades are cooking, and this amount of current is allowed to act for about ten seconds longer, when the cable is disconnected. A few seconds later a knife should trim the projecting portion of pile from above the blades of the angiotribe, which should be loosened and removed, exposing a white, thin, sterile ribbon in the hollow of the shield. On removal of the shield the ribbon shrinks to the side of the bowel. The same procedure should be carried out on the various pile areas and at the completion of operation a number of bloodless sterile amputation tracks projecting into the bowel and parallel with its axis will be left. A little care is required so that the clamp may not take in the skin margin, though a little of this involved seems to obliterate the nerve filaments. There is never so much pain in this operation, he says, as in others. Unnecessary manipulation during efforts to clamp successfully the pile areas might open one or more ribbons already made, but this is far less likely to occur than with the clamp and cautery, and with proper technic should never happen. The postoperative period in all his cases thus operated on, 25 in number, was much less painful and cleaner than by the various other methods by which he has operated. He thinks it better to put a little gauze into the bowel. In case of fissures he uses his cautery knife and burns through the base of the fissure thoroughly after the completion of the hemorrhoidal operation. In one case he dissected a fissure and closed with catgut. He thinks this method will be very convenient for surgeons provided there is an electric current in the room, but its great practicability is hardly yet understood. He has lately developed a foot brake to turn on or off the current as desired, which places the operator in absolute control. The counting of seconds to get the proper amount of heat in th compressed tissue is necessary, but this is soon learned practically.

2. **Xanthoma or "Mushroom Growth."**—In the case reporte by Moser the patient, a boy, was covered with bright yellow tumors of various sizes, chiefly over tendons and bursæ varying in size from that of a pea to that of a hen's egg The bases had usually a normal skin structure, were somewhat pinkish in color, had no inflamed areolæ and the tumors were not painful but annoying. He is inclined to consider th growth as a distinct type that may possibly become sarcomatous. Its chief distinctive features are reviewed as follows:

1. The large size of the tumors.
2. Their "mushroom" appearance.
3. *Their smooth, even surface, being one mass*, and not nodulated tuberculated and fissured, as in the ordinary form of xanthoma tuberosum, which is formed by the coalescence of smaller masses or papules and is not infrequently associated with the macular variety of flat plaques or striæ, which in this case were conspicuously absent.
4. Their predilection for tendons and bursæ.
5. The *absence* of icterus.
6. The absence of glycosuria.
7. Their occurrence in childhood, which is very exceptional for xanthoma tuberosum, most cases occurring in middle life, especially in women.
8. Their *subcutaneous character*.

3. **Uterine Curettement.**—Van de Warker strongly objects to the too frequent use of curettement, especially the use of the sharp curette, pointing out the serious dangers of bowel perforation, etc. He says the text-books and surgical teachings are at fault in this matter. He gives instances of the bad effects and describes the proper aseptic measures required and the technic, character and treatment of complications, such as uterine perforations. In this latter case it would be necessary to see that there has been no hernia of the bowel or omentum through the wound. This will require a free opening. He thinks it is better in this case to incise the cervix clear up to the inner neck to allow the finger to pass freely, and if hernia has occurred it should be reduced. The probability is that it will not come down again, but if the rupture is extensive, gently applied strips of gauze pressed against the uterine side will prevent hernia. They should not be inserted into the wound, which would interfere with healing and contraction. Then the peritoneal cavity should be opened through the postvaginal space and wiped out with a sponge on a long curved holder, and gauze inserted to the level of the fundus and brought into the vagina. If the intestine is torn and it is necessary to open the abdomen, in case the uterine tissue is friable, no attempt should be made to suture the uterine wall, but slide a flap of peritoneum over the rent and suture with fine silk. The uterine rent can be left to itself. An abdominal incision adds enormously to the dangers in these cases and should never be done except to repair intestinal damage.

4. **Epididymis Anastomosis.**—Martin reports a case of sterility due to earlier urethritis and double obliterative epididymis in which repeated examination failed to show the presence of spermatozoöids. Operation was performed and spermatozoöids found in the tail of the epididymis. The vas deferens was implanted into the wound and sutured with a fine silver wire and the skin closed with catgut. The dressing slipped the next day, exposing the wound, which became infected and suppurated superficially. Later examination showed normal seminal fluid The patient completely recovered, and his wife, on resuming sexual relations, was delivered of a normal girl baby exhibiting a striking resemblance to her father.

6.—This is abstracted in the report of the Pennsylvania State Medical Society in this issue.

Medical News, New York.

October 10.

9 Symposium: The Teaching of Therapeutics. Reynold W. Wilcox.
10 *From Pharmacologic Science to Therapeutic Art. Eli H Long.
11 Recent Advances in Genito-urinary Surgery. James Pedersen
12 On Last Year's Progress in Surgery. Carl Beck.
13 Recent Advancement in the Therapeutics of the Eye. John E. Weeks

14 Report on Laryngology. Charles H. Knight.
15 •Recent Advances in Electrotherapeutics William J. Morton.
16 Recent Advances in Orthopedic Surgery. Henry L. Taylor.
17 •Notes on Obstetric Therapeutics Charles M. Green.
18 •Recent Advances in the Therapeutics of Pediatrics Noble P. Barnes.

10 The Teaching of Therapeutics.—Long advocates the case method, or what may be called the Socratic method, where students and teachers meet for discussion of cases and their treatment. The discussion is given direction by the teacher, but each student is free to ask questions and state opinions. The marking is based on ability to develop or reason out points in the discussion. Various diseases are gone over and the student is expected to acquire a knowledge of the principles of treatment, the ability to weigh indications and contraindications and reason out a rational plan for each case, as also to learn the relative importance of hygiene and medicinal treatment and the various drugs to be employed. It gives him a more intimate knowledge of the remedies of greatest importance and those of subordinate or uncertain value, and a valuable medical training that he will need in actual practice.

15. Electrotherapeutics —Morton reviews the advances in phototherapeutics, summing up by saying that all the artificial sources of light possess only a feeble power of penetrating living animal tissue until prior compression (as by Finsen in lupus) is employed. There is really but one conclusion to be drawn, and that is that all forms of solar, electric arc and other artificial lights are entirely supplanted in their efficacy and usefulness by the *x*-rays. These may in turn give way to Becquerel's radiations, but the present cost of radium is prohibitive. Recent advance in phototherapy, therefore, consists in an increasing clinical experience with the *x*-rays. In the selection of a working tube, a soft tube will do superficial work while the hard tube is better for deep structures and is safer. The question whether an *x*-ray burn can be a cancer nidus is answered in the affirmative and 4 instances noted. Morton also mentions the possibility of secondary infection of open cancer. The use of the Crooke's tube itself gives evidence of this in its attraction for dust, and what is true of the tube is equally true of the patient. The case is as if we sprayed the dust of the room directly into the ulcer. In conclusion he calls attention to the *x*-ray histofluorescence with which he has practiced for some time, and this may be considered as possibly an advance step in the treatment of cancer. It occurred to him he might administer a drug medicinally, capable of fluorescence, and at the same time increase its fluorescence in the tissues themselves by means of the *x*-ray. He can not affirm it, but he believes that cases treated by a combination of fluorescing medicines and the *x*-rays have made more improvement and more certain recoveries than cases not thus treated.

17. Obstetric Therapeutics.—Green discusses the use of antistreptococcic serum and the intravenous use of formalin for puerperal sepsis. He has observed 3 cases of ineffective formalin injections, "2 died in spite of, and 1 recovered notwithstanding, the use of formalin." A safe and effective intravascular antiseptic agent against the streptococcus is not known. He notices also obstetric asepsis and the use of suprarenal extract as an astringent and hemostatic in uterine hemorrhage. He goes at length into the subject of obstetric anesthesia, giving his own experiences with the scopolamin-morphin admixture recommended by Von Steinbüchel as an ideal anesthetic for obstetric use. Scopolamin hydrobromate and morphia nitrate were so combined that ten minims of the mixture contained 1/200 gr. of the former and 1/6 gr. of the latter drug; administered hypodermically. Some 16 cases of primiparæ thus treated are reported with good results. In 3 multiparæ it seemed to have less effect in relieving the pains. He remarks that as a result of these observations it would seem that in the scopolamin-morphin narcosis we have a valuable addition to our obstetric therapeutics. The combined drugs seem especially serviceable in primiparæ of nervous, excitable, hyperesthetic organization. The best results are obtained when the drugs are given early in the first stage as soon as nervous irritability appears. He remarks in regard to puerperal eclampsia that recent experience has taught him that in hyoscin and morphin in heroic doses we have a potent agent for the control of extreme restlessness and maniacal excitement. Three cases are reported. As regards the prophylaxis of the condition he says he has never had a case of puerperal eclampsia among women who have been under his care during pregnancy. All the cases he has seen have occurred in consultation or hospital practice. Careful attention to diet, hygiene, the condition of the nervous system and the functional capacity of the eliminative organs has brought him suitable results in cases where he has supervised the condition from the beginning. Nicholson's theory that the use of thyroid extract is indicated in eclampsia, the latter being due to thyroid inadequacy, Green considers worthy of further investigation.

18. Pediatrics.—Several points of interest are mentioned by Barnes: The importance of adapting children's clothing so as not to interfere with muscular development; the usefulness of thyroid in mammary inactivity; the danger from tuberculous milk; the treatment of anemia; the isolation of contagious diseases in children; the use of antistreptococcic serum in scarlet fever; the usefulness of guaiacol and creosote carbonate in pneumonia, and the valuable therapeutic advantages of lumbar puncture, as well as its diagnostic utility.

Medical Record, New York.

October 10.

19 •Fibrocystic Tumors of the Uterus; Their Etiology. Mary A. Dixon Jones.
20 •Copper in Syphilis. A. F. Price.
21 Aneurism of the Transverse Arch, with Obliteration of the Innominate and Left Common Carotid Arteries. U. S. Bird.
22 A Case of Combined Pyloric Cancer and Phlegmonous Gastritis G. M. McCaskey.
23 Congenital Absence of Rectum with Imperforate Anus. G. W. Squires.

19. Fibrocystic Tumors.—Jones discusses the literature on the etiology of fibrocystic tumors, pointing out that the majority of cases that have been described are fibrocysts of tumors, and reports cases of fibrocysts of the uterine tissue itself. There is a change of the whole uterine tissue and the formation of partial blood cysts. She gives her ideas as to the formation of blood corpuscles and inflammatory bodies and claims that all abnormal growths are in a pathologic condition and in a state of change, and possibly in these cases are developing into even more serious conditions, such as malignancy, etc.

20. Copper in Syphilis.—Price notices the intolerance of copper in old syphilis, and the results of his treatment with small increasing doses. An experience of many years, he says, has led him to formulate his belief as follows:

1. The treatment of syphilis in all its stages, inclusive of the cachectic and the parasyphilitic forms, is well founded on sulphate of copper in the average dose of 1/30 gr., aided by such a quantity of blue mass as is borne readily by the patient.
2. In old syphilis in any form the copper salt must be given in minute doses, and gradually increased as tolerance is established, until the usual dose of 1/30 gr. is given, when the mercurial should be added in a rather small dose. It is sometimes better to give the medicine only on alternate days.
3. In acute syphilis the copper salt is to be given in the dose of 1/30 gr. and the mercurial added at once and increased as much as the patient will tolerate, in order that the disease shall be neutralized and eliminated as completely as possible.
4 Iodin, iron, arsenic and tonics of any sort, while useful, occupy a subordinate place in the treatment of syphilis.
5 Alcohol and, especially, tobacco, should be forbidden to syphilitics.

The Boston Medical and Surgical Journal.

October 8.

24 Memorial Meeting to John Homans, M.D. Addresses Read Before the Boston Society of Medical Improvement. Maurice H. Richardson and others
25 •The Operative Treatment of Umbilical Hernia. J. Collins Warren.
26 •Vesico-intestinal Fistula. Joshua C. Hubbard.

25. Umbilical Hernia.—Umbilical hernia in children rarely comes under the surgeon's care, as it is usually kept reduced by a suitable support until the opening disappears and a cure is effected. The typical surgical case is that of a woman of middle or advanced life, corpulent habit and mother of a large family. The etiology seems apparently to be the changes of pregnancy and the relaxed condition in which the parts are left, the force of gravity and the pressure of clothing causing giving way of the weakened walls. As the adipose tissue accumulates the cicatricial tissue of the umbilicus is drawn on

and drags the funnel-shaped fold of peritoneum through the true abdominal wall. While this form of hernia has generally been considered more liable to relapse than the others, recurrences, Warren says, are becoming fewer with improved conditions. This is not due to new methods but to more care in suturing and in perfecting the operation. The hernial sac should be exposed by two slightly curved incisions on the median line, meeting above and below and exposing the walls of the sac as far as the neck and surrounding aponeurosis. It should then be opened and the contents freed from adhesions and returned into the abdomen. If the omentum is matted together it had better be excised at a point below the portion usually occupying the sac. The sac should then be carefully excised and the vessels secured. The opening that is left in the abdominal wall is oval, with its long diameter lying at right angles to the linea alba. The peritoneum should, if possible, be separated from the fascia and secured by fine sutures. The edges of the hernial ring consist of the tendinous raphe formed from blending of the aponeuroses of the abdominal muscles. The accurate coaptation of these edges is important and is best effected by closing the ring transversely instead of vertically, which is much easier. The material used for suturing the peritoneum is fine silk, No. 8, such as is used for intestinal suturing; No. 10 silk is used for suturing the aponeurosis. Enough of this layer should be taken up to hold the sutures securely. Warren does not advise the use of quilted or complicated sutures or exposing the edges of the recti except in rare cases of wide separation. In aseptic wounds attention to the above-mentioned points is enough. The adipose layer and outer integuments should be trimmed with a knife so as to fall easily into apposition. This involves excision of the umbilicus and a certain amount of skin on either side. The adipose layer is then caught together by medium silk sutures and the skin united by silkworm gut. A new feature in the treatment of these cases is excision of the thick layer of adipose tissue, sometimes several inches in thickness in the median line. To remove this a median incision should be extended through the skin and subcutaneous adipose tissue from a point two inches below the ensiform cartilage to the transverse fold defining the upper limit of the mons veneris. The skin, with the adipose tissue still attached, is then dissected away until the integument has been freed as far as the loins. The vessels that are divided are easily secured. After hemorrhage has been arrested the skin should be attached to the aponeurosis by two or three catgut sutures to prevent dead spaces, and the edges of the skin should be united in the usual way by silkworm gut. This leaves a long cicatrix, but it contracts considerably with time. It is a better method than the transverse or crescentic-shaped incision by which the fold itself might be excised. He reports a number of cases from his practice.

26. **Vesico-intestinal Fistula.**—After reporting a case in detail in which the patient died in a postoperative delirium, Hubbard describes the condition, which is most frequent in males, three cases to one in women. This is partly due to the intraposition of the vagina between the bladder and rectum. The cause seems to be an inflamed perineum or inflamed new growth of the uterus and its adnexa, the primary focus invading secondarily the bladder and intestines thus forming a fistulous connection between them. The fistula is usually rectal, next to that in frequency the sigmoid and colon are involved, and occasionally the ileum. The symptoms are discharge of gas and fetid matter through the urethra and urine through the rectum. There are usually pain and vesical and rectal tenesmus, cystitis, pyelitis, etc., caused by the presence of the fecal matter, but sometimes the discharge of gas alone is the only symptom. He points out the various conditions which may need to be differentiated from it, such as the condition of the bladder after catheterization or litholapaxy or diabetes, which may develop the gas, and the possibility of the existence of fistula, with an intestinal opening into the urethra below the bladder. The prognosis depends primarily on the cause of the fistula and, in simple inflammatory fistula, largely on its size. Palliative treatment is devoted to keeping the bladder and rectum clean by thorough irrigation and drainage or in some cases by the position of the patient. He mentions the various methods of cutting for fistula, the rectal route, the perineal route, the sacral route, the vesical route, which is difficult, and the abdominal route. The best results appear to be with the rectal or perineal routes. The causes of death in the fatal cases have been peritonitis and shock.

American Medicine, Philadelphia.

October 10.

27 Construction of the Proteid Molecule. B. H. Buxton.
28 *The Rôle of Local Sanatoriums in Preventing the Spread of Tuberculosis. DeLancey Rochester.
29 Pyloric Carcinoma, with Symptoms Resembling Gastrocolic Fistula. David L. Edsall and Charles A. Fife.
30 Insanity as a Sequel to Physical Conditions. A. B. Richardson.
31 Ca[illegible]d Middle Lobe of the Prostate, [illegible] Recovery: Followed by Epididy[illegible] Peritonitis. Recovery without Operation: Universal Eczema and Finally Cholelithiasis. Moses Behrend.
32 *Some Observations on Trachoma. A. A. Ripperger.
33 Eye Strain and Civilization. George M. Gould.

28. **Tuberculosis.**—Rochester would have two types of sanatoriums, one for the incipient cases and another for the chronic ones, but the essential point is removal of the patient from his surroundings. He remarks in favor of this, claiming that the procedure is not unprecedented and the good to the entire race from such sequestration kept up persistently for ten or fifteen years would far outweigh the slight psychic disturbance of the few. The bodies of all dead from tuberculosis should, of course, be cremated.

32. **Trachoma.**—Ripperger gives the results of his own experience, which seems to show that uncleanliness and close huddling together of people under unhygienic conditions favor the spread of the disease. He also remarks on the advantages of protargol in treatment.

Cincinnati Lancet-Clinic.

October 10.

34 The Doctor and the Public. E. Stuver.
35 Iodine and Its Use. Brose S. Horne.
36 Surgery of the Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued.) B. Merrill Ricketts.

American Practitioner and News, Louisville, Ky.

August 15.

37 Diagnosis and Management of Appendicitis. A. D. Willmoth.
38 Remarks on the Criminal Insane and Their Care. Joseph W. Irwin.
39 Cerebral Sclerosis. Orville A. Kennedy.
40 Address, Medical Department of the University of Louisville. W. H. McCracken.
41 *The Paroxysms of Whooping-cough Treated by Pulling the Lower Jaw Downwards and Forwards (Naegeli). Jacob Sobel.
42 A Case of Gastric Syphilis. H. A. Lefleur.
43 *Fibromata as Complications of Pregnancy. Reuben Peterson.

41. **Whooping Cough.**—Sobel calls attention to Naegeli's method of relieving paroxysms of whooping cough by pulling the lower jaw downward and forward, a procedure which has not been noticed to any extent by recent writers. He has used this method in all cases of whooping cough presenting themselves at the dispensary for children's diseases at the Beth Israel Hospital, New York, since June, 1901; a total of 96 cases, the age ranging from three months to eight years. No selection of cases was made and all stages were observed. He has had only 9 failures out of the 96 in which no effect on the paroxysm was produced by this method. He claims that the method is usually more successful in older children. In cases without the whoop the expiratory spasm with its asphyxia is generally overcome. The method deserves a place in the treatment of pertussis and is as successful as any other. It is harmless, painless, and easy of application. The only contraindication to it is the presence of food in the esophagus or mouth. A patient treated this way is less likely to suffer from complications and sequelæ than those treated only medicinally. Mothers and attendants should be instructed in the method. The best other treatment should accompany.

43.—This article appeared elsewhere. See The Journal of September 19, ¶50, p. 746.

The Laryngoscope, St. Louis.

September.

44 Some Critical and Desultory Remarks on Recent Laryngologic and Rhinologic Literature. (Continued.) Jonathan Wright.
45 Retropharyngeal Abscess; Report of Three Cases. L. C. Cline.

46 Case of Mastoid Suppuration Accompanied by Epithelioma. Carl E. Munger.
47 *The Import of the Salivary and Nasal Secretions in Hay Fever. D Braden Kyle.
48 Report of Cases of Pyogenic Brain Diseases, Associated with or Caused by Acute and Chronic Nasal Suppuration. Thomas Hubbard
49 Supernumerary Teeth in the Nose and the Maxillary Sinus. J. M Ingersoll.
50 Presentation of Instruments. (Laryngotomy Canula, etc.) Chevalier Jackson.

47. Nasal and Salivary Secretions in Hay Fever.—Kyle thinks from a study of the saliva we can gain some idea as to variations in the chemistry of the body. He applies this suggestion to the etiology of hay fever, holding that there has not yet been determined a definite cause. He thinks in many cases local irritation of the mucous membrane is brought about by some chemical change in the secretion of the mucus-secreting glands, and that there is quite a field for investigation in this line to determine if the irritating material bringing about an attack is not manufactured within the system.

Medicine, Detroit.

September.

51 *Atony of the Stomach. J. H. Salisbury.
52 *The Prevalence of Tuberculosis, and Measures for Increasing the Individual Resistance to Its Attacks. F. M. Pottenger.
53 Compound Ovarian Cystomata. W. Ramsay Smith
54 *Eye Complications that at Times Attend Measles. George F. Suker.
55 The Treatment of Acute Inflammations of the Middle Ear. Otto J. Stein
56 A Glance at the History of Medicine. Charles D Center

51. Atony of the Stomach.—Salisbury agrees with Stiller as to the importance of the splashing sound and the floating tenth rib as signs of the condition. He concludes that mobility of the tenth rib marks an arrest of development connected in some way with imperfections in the abdominal organs manifesting itself particularly in atony of the stomach and intestines and corresponding atony of the ligamentous tissues and skeletal muscles, especially of the abdomen. The only common structure that we can suppose to produce this symptom is the nervous system, hence he refers all manifestations that follow this to disturbance of the nervous system affecting the nervous supply of the abdominal organs and corresponding external parts. The consequences of atony are, first, the imperfect mixture of the ingested food with the gastric secretions. Gaseous fermentation rarely occurs unless the food is retained too long, though other fermentations may develop, producing trouble. Other symptoms which are likely to occur are the entrance of bile from the duodenum through the relaxed pylorus and the prolongation of the digestive act beyond the time when the stomach should be empty. Often a second meal is introduced into the stomach that has not relieved itself of the first. The question of atony terminating in dilatation is discussed. He thinks that probably every degree results in a temporary and slight degree of dilatation. Retardation of digestion has a tendency to set up gastritis. The prognosis of chronic atony ofthe stomach depends more on the complications than the disease itself, and the tendency to gastroptosis is a marked feature. The discovery of a floating tenth rib may enable the physician in acute debilitating diseases to put the patient and friends on their guard and save trouble, especially if the disease is of a disabling nature. The disorder must be recognized as an affection of the nervous system demanding general systematic tonic treatment. Rest in bed is an important adjunct; care as to the diet, a nutritious and not too bulky one, and repeated analyses of the stomach contents to test the digestive capacity, are of importance. Cold bathing, massage, electricity, etc., exercises to strengthen the muscles of the trunk, play important parts in the treatment. The faradic current is to be preferred to the galvanic.

52. Tuberculosis.—Pottenger considers that tuberculosis is the most frequent of fatal diseases and gives tables showing the mortality in different countries. While we have been obliged to discard heredity as a common cause, he thinks we have gone too much to the other extreme and neglected the question of predisposition. Childhood is a period that needs our most earnest attention, and while we must recognize the possibilities of heredity, most of the trouble comes from environment. Our hope as to the future prophylaxis of tuberculosis largely depends on our attention to this point. Overcrowding is one of the most active causes in rendering the environment unhealthy, and the part played by acute infectious disease, especially in childhood, deserves earnest consideration. He also cautions against over-exercise and over-training as a possible cause.

54. The Eye Complications of Measles.—Suker reviews the various eye complications as they occur in measles, the most frequent of which are conjunctivitis and superficial inflammatory conditions. Fundus complications are rather infrequent as well as other deep-seated disorders. The possible complications are reviewed in detail. Among the more frequent ones are mentioned catarrhal and follicular and phlyctenular conjunctivitis and phlyctenular keratitis. In both phlyctenular complications the gastro-intestinal tract must be looked after as the possible source of an auto-intoxication. Marginal blepharitis is a common accompaniment of measles. Photophobia and asthenopia are also common. Of the deep complications optic neuritis and neuroretinitis are the most frequent of the fundus conditions. Total blindness coming on during an attack is rare. Muscular insufficiencies are sometimes noticed. In some cases strabismus has been credited to the disease. Disturbances of accommodation of the peripheral type are sometimes observed after apparent recovery in measles as in diphtheria. Non-inflammatory complications scarcely require treatment except rest for the eyes and tonics. The strabismus should be treated as if from any other cause and inflammatory disorders receive such treatment as would ordinarily be suitable. Suker thinks, however, that it would not be amiss to employ mild prophylactic treatment in the scrofulous or greatly debilitated cases so as to guard against phlyctenular complications and continue this for several weeks.

American Journal of the Medical Sciences, Philadelphia.

October.

57 *Hypertrophic Osteoarthropathy, with Report of Two Cases. Theodore C. Janeway.
58 An Hour glass Stomach Observed in Situ. Thomas Dwight.
59 An Operation for the Repair of the Pelvic Floor. J. G. Mumford.
60 *Two Cases of Left Duodenal Hernia, in One of Which the Sac Contained the Entire Small Intestine, the Cecum and a Portion of the Colon, Which Was Strangulated. Leonard Freeman.
61 Rare Case of Appendicular Abscess Situated Between the Layers of the Mesentery of the Small Intestine. Joseph C. Bloodgood,
62 *The Results in Bloodless Reposition of Congenital Dislocation of the Hips, with a Report of Cases. Gwilym G. Davis.
63 Tortuosity of the Aorta. Joseph Sailer and G. E. Pfahler.
64 The Occurrence of the Bence-Jones Albumin in a Pleuritic Effusion. Isador H. Coriat.
65 Multiple Myeloma (Myelomatosis), with Bence Jones Proteid in the Urine. F. Parkes Weber. With Report on the Chemical Pathology. R. Hutchison and J. J. R. Macleod.
66 A Convenient Modification of Tests for Hydrochloric Acid in Gastric Contents. Charles S. Fischer.
67 Two Cases of Relative Aortic Insufficiency. W. F. Hamilton and J. R. Byers.
68 The Community and Tuberculosis. Beverley Robinson.
69 *An Epidemic of Typhoid Fever Due to Impure Ice. R. H. Hutchings and A. W. Wheeler.
70 *The Transmission of Bovine Tuberculosis by Milk, with a Tabulation of 86 Cases. George M. Kober.
71 *Tabes in the Negro. D'Orsay Hecht.

57. Hypertrophic Osteo-arthropathy.—Two cases are reported by Janeway illustrating the symptomatology of the Marie and von Bamberger types of this condition. He discusses the theories and reviews cases he has found in the literature with regard to the etiology and pathology of the affection, and concludes that the incidence of osteo-arthropathy and tubercular pulmonary lesions is too marked to be made light of. Other associations are suppurative, gangrenous, etc., but some cases seem to have occurred without being apparently secondary to any known disease. He remarks that great individual differences in the reaction of the bones to irritants evidently exist in different persons. He asks for a careful recording of cases of osteo-arthropathy and allied conditions by the radiograph, as the problem of its true etiology requires a larger knowledge of bone pathology and of pathologic metabolism than we now possess.

60.—See abstract in The Journal, xl, p. 1669.

62. Congenital Hip Dislocation.—Four cases are reported by Davis involving seven hips. One was operated on and one was lost sight of while under treatment. Of the other 5, 2 were anterior transpositions; 3 were apparently perfectly normal in every way, five, two and one-half years and six months after replacement by manipulation. He reviews the methods of open and forcible bloodless reposition and notes their respective advantages. The general conclusion is that perfect reposition is rarely attained in forcible reposition. As an absolute cure it hardly meets the full claims. If one is critical as to cures like Kirmisson, Hoffa, Kollicker, Schede, Codivilla and others, we can call 5 per cent. cured, but if one is more easily satisfied then the cures will amount to 50 per cent. It is probable that total failure under the age of 6 to 8 years is rare; that approximately one-half the cases are replaced in a more or less normal acetabulum and kept there; that a small proportion are apparently quite normal; that in most of the remainder the head is transposed forward or forward and upward and remains there. In many of these cases subsequent operation may perfect or improve the condition. Others seem to do well and still others have a tendency to slip backward to their former condition. It is absurd to speak of a cure within a short time after reposition. One should be cautious as to promising results of treatment.

69.—See editorial in The Journal of October 10, p. 913.

70. **Bovine Tuberculosis.**—From a careful study Kober concludes that tuberculosis may be transmitted to man in milk from tuberculous cows. The danger is real and can not be measured by the actual number of recorded cases, but should be judged, in part at least, by inoculation and feeding experiments and the accidental wound infection that has occurred. The degree of danger may also be estimated by the prevalence of bovine tuberculosis and of the forms other than phthisis pulmonalis in man, remembering that the infectious qualities are greater when the udder is the seat of lesions, and that Gebhardt's experiments show that tuberculous milk when diluted with milk of sound animals in the proportion of 1 to 40 loses its infective power. Experiments also indicate that while the bacilli of human tuberculosis possess different degrees of pathogenic power and are often of feeble virulence for cattle, Koch's claim that human and bovine tuberculosis are distinct, and that human tuberculosis can not be conveyed to cattle, appears to be disproved aand his failure to secure results may be attributed to the use of human bacilli of diminished virulence. Recent studies have strengthened Smith's claim that there are two types of tubercle bacilli, the human and bovine, with morphologic and biologic differences, but both of these may produce virulent cultures which, when inoculated into animals, produce the disease. It is desirable to have further study as to the frequency of primary intestinal and abdominal tuberculosis in all cases, whether the child died of tuberculosis or not, and bacteriologic examination should be directed to the existence of both of these types. As to whether the bovine type predominates, a careful chemical analysis of the milk of tuberculous animals should be made to determine the amount of phosphoric acid as compared with the quantity in normal milk, since de Schweinitz's researches seem to show that the excess noted by the older chemists is really the result of bacterial activity in the udder of the cow. The pathologist need not reverse his opinion as to the identity of human and bovine tuberculosis and the sanitarian has no reason to assume that the human subject is immune against infection or to cause him to relax his efforts in preventive measures.

71. **Tabes in the Negro.**—Hecht reports a carefully examined case and discusses the disease, especially in its occurrence in the black race. He concludes that long residence with the white man has made the American negro anthropologically, physiologically, and pathologically different from the original stock. This has been due to acclimatization, social environment and more than anything else to miscegenation. This latter and the advent of personal liberty are responsible for a new era of diseases. The newer diseases in the negro, of which tabes is an example, are becoming more commonly recognized, miscegenation being the potent factor in reducing the negro's resistance. Tabes probably occurs more commonly than has been supposed, and the failure to recognize it may be due to the abeyance or total absence of the ataxic symptoms in the amaurotic type. The Edinger-Marie observations as to optic atrophy satisfactorily explain that class of cases in which the tabes is arrested by blindness. Finally he concludes that Aryan admixture is essential to the production of tabes in the negro.

Brooklyn Medical Journal.

October.

72 *Notes on Urinary Casts. Z. Taylor Emery.
73 A Report of Present Methods of Administering General Anesthetics in the Brooklyn Hospitals, with Comments. A. F. Erdmann.
74 The National Formulary. W. N. Belcher.
75 The Hypothesis of Cohnheim Concerning Carcinoma. Algernon T. Bristow.

72. **Urinary Casts.**—The clinical significance of hyaline casts is open to many qualifications, according to Emery. They may be dependent on weakened or disturbed circulation or subject to altered conditions of the blood and febrile conditions. If the casts are small or medium sized and not accompanied by albumin and not numerous, or occurring in a man over 45 years old, they need not be considered necessarily of special significance, but if they are large or medium sized in large numbers, further examination and careful inquiry are indicated. The appearance of hyalin casts containing granular matter does not always indicate an active destructive process within the kidney, nor do small hyaline casts in young persons after exhausting or long-continued severe exercise. Large hyaline casts in the urine of middle-aged persons, if long continued, may indicate beginning intestinal nephritis. If there is a continued trace of albumin, suspicion should be excited to the point of certainty, especially if the daily output of urea is decreased. The occurrence of epithelial, blood or granular casts in the urine is of sufficient gravity to call for systematically conducted chemical and microscopic examination, though such may occur from localized infarcts which heal up. In patients ill from tonsillitis, pneumonia, and typhoid, albumin and casts may appear and no detrimental effects follow. Bacterial casts are occasionally seen and are of importance. Waxy casts are often of grave import. He suggests in cases in which it is impossible to obtain a twenty-four-hour specimen which can be identified as such to make a series of examinations at intervals during several weeks.

American Gynecology, Baltimore.

September.

76 *Concerning Tuberculosis of the Female Sexual Organs and the Peritoneum. J. Veit.
77 *Intestinal Anastomosis by the Elastic Ligature. Theodore A. McGraw.
78 A Sketch of the History of Obstetrics in the United States up to 1880. (To be continued.) J. Whitridge Williams.
79 *Instrumental Dilatation of the Cervix in the Last Months of Pregnancy. H. S. Lott.
80 *The Effect of Anesthesia on the Body Temperature. W. H. Morley.

76. **Tuberculosis of the Genital Organs and Peritoneum.**—Veit finds that this is more frequent than was formerly supposed, and while it may be primary, the secondary form is the most common. It is usually descending, more rarely ascending, but the infection may also follow the blood vessels or occur after accidental injury of the lymph glands. The diagnosis is based in particular on the discovery of the bacillus; in some cases, however, the certain occurrence of tubercles is sufficient. Recovery may be spontaneous. In primary isolated genital tuberculosis operative treatment, however, is still the best. In secondary tuberculosis or cases not isolated, the general therapeutics must be first considered, especially constitutional treatment. Good and permanent results are sometimes obtained from operation and, exceptionally, this may be considered. The best local palliative is iodoform. He says that tuberculosis of the peritoneum is always secondary. There are two forms, the ascitic and the adhesive. It may be secondary or primary. Peritonitis, with extensive nodule formation, which can not be explained by ovarian tumors or carcinoma, must generally be considered as tubercular. It may even heal spontaneously, though not very frequently, and is cured by laparotomy, even though some failures, due mostly to too far advanced tuberculosis in other organs, do occur. A generally accepted explanation of this healing process does not exist;

the influence of the serum (whether normal or antitoxin) is very probable. Therapeutically speaking, therefore, recent cases should be operated on when difficulties arise as the result of disease. A repetition of the operation may, if it is performed very early, become necessary. Chronic cases should be observed, and if spontaneous recovery does not soon occur, laparotomy should be performed. A simple laparotomy along the linea alba with evacuation of the fluid and closure of the abdominal cavity is usually sufficient. The abdominal radical operation should be performed only if at the same time we find a completely isolated genital tuberculosis. Veit's article was one of the principal addresses at the last international congress of gynecology.

77.—This article appeared elsewhere. See THE JOURNAL of October 17, ¶7, p. 985.

79. **Instrumental Dilatation of the Cervix.**—Lott redescribes a metallic dilator invented by him, a description of which was published in the *North Carolina Medical Journal* in 1892. Bossi's dilator was first described in an Italian journal in 1891, and Lott's invention was entirely without knowledge of the Italian's work. It was employed successfully in this country ten years before the Bossi invention was here introduced.

80. **The Effects of Anesthetics on the Temperature.**—Morley gives his observations on the effect of anesthetics on temperature. He concludes that ether anesthesia lowers the body temperature; that this is due to the increased heat output through the dilated skin vessels and to lessened heat production from diminished muscular movement. Hence the patient should be well protected with lint and bandages and the operating room should be warm. Many of the so-called postoperative pneumonias are due to the chilling of the patient.

Proceedings of the Philadelphia County Medical Society, Philadelphia.

September.

81 *The Management of Fever in General Augustus A. Eshner
82 *The Contagiousness of Pneumonia. Robert N. Willson.
83 A Report of Three Cases of Lupus of the Mouth. W. G. B. Harland.
84 Ligation of the Subclavian Artery for Aneurism of the Second and Third Portions. Charles F. Nassau.
85 Three Cases of Subcutaneous Injection of Paraffin for the Correction of Nasal Deformities A. B. Kirkpatrick.

81.—This article appeared in THE JOURNAL, July 11, 1903.

82. **Pneumonia.**—Three cases in the same house in previously healthy persons are reported by Willson. The possibility of their being cases of independent infection seems dubious.

Northwest Medicine, Seattle, Wash.

September.

86 Presidential Address. Washington State Medical Association. Charles McCutcheon.
87 *The Hygiene and Dietetic Treatment of Chronic Nephritis. Victor C. Vaughan.
88 *Renal Decapsulation as a Cure for Chronic Bright's Disease. Franz H. Coe.
89 The Treatment of Vascular Tumors by the Injection of Boiling Water. N. G Blalock.
90 Treatment of Pelvic Disease in the Female Insane. Ernest A Hall.
91 Fatal Poisoning by Oil of Wintergreen. J. B. McNethney

87. **Chronic Nephritis.**—Vaughan reviews the dietetic instructions of various authorities. He criticises the exclusive milk diet. The diet which Vaughan has found most serviceable in chronic nephritis is, with the exception of cream and butter, wholly vegetable. He forbids meat in every form, eggs and milk. What he seeks is to profoundly alter the proteids in the circulating blood, and believes he has the best reasons for the selection of the vegetable diet. The urine for twenty-four hours should be collected and its albumin carefully determined, both absolute and percentage, also the amount of urea and total nitrogen should be ascertained. Then the patient should be placed on a diet for three days or more and corresponding analyses made. The diet permits cream, which should be separated as quickly as possible from the milk, and should not contain more than 1 per cent. of proteid. The amount of cream per day is limited to 500 grams, or one pint. Among the cereals he prefers cornmeal mush, which may be allowed *ad libitum*, or oatmeal and cracked wheat may be substituted. Sugar is allowed freely for the mush and zwieback and butter and potatoes complete the substantials of the ration, although he permits the legumins, peas and beans either fresh or canned, green vegetables, fruits and melons. Patients living on such a diet have no difficulty in becoming accustomed to it and lose their desire for meat and eggs. He tabulates the number of calories in this diet, showing that it is sufficient. In order to scientifically determine the value of such a diet in chronic nephritis it will be necessary to test the relative toxicity of the blood of the patients on animals, especially with reference to its action on the kidneys under different diets. This offers a promising field of research. He considers the diet as important in nephritis as in diabetes. The digestive organs need to be carefully watched. Lavage of the stomach is frequently indicated and an analysis of the gastric juice should be made in all cases. The eliminative organs, bowels, skin, etc., should be kept in normal condition, but not too active. Flannel clothing, varying according to the seasons, should be used. Blood counts and hemoglobin estimates should not be neglected.

88. **Renal Decapsulation and Bright's Disease.**—Coe relates his own case and his observation of others treated by Dr. Edebohls and two cases from his own operative experience. He has become an advocate of the method from these observations. He suggests to those who will try the surgical procedure to keep the patient in bed for one week preceding the operation, examine the mixed twenty-four-hour urine for reaction, quantity, albumin by the Esbach or better still by the centrifuge method with potassium ferricyanid; supplemented by repeated estimation of urea for total average quantity. Some value can be attached to the lessened quantity of chlorids as demonstrating renal insufficiency. He says do not trust the settling glass for examination for casts; use the centrifuge. Do not think there is no nephritis because there is no albumin; use the contact test. Conspicuous edema is not essential. Be sure of the condition of the heart and blood vessels. Do not belittle the difficulties of operation, which may be simple or complicated according to the thickness of the walls, the high position of the kidneys, the shortness of the pedicle, possible injury to the nerves or puncture of the pelvis. He believes in the use of the method in eclampsia; in the hands of a rapid operator he would suggest it as the operation of choice. The danger of anesthesia he says may be negative. He is using at present in all his major operations the Bennett inhaler and combined nitrous oxid and ether anesthesia.

Journal of the Michigan State Medical Society, Detroit.

October.

92 Skiascopy of the Heart. A. W. Crane.
93 *A Procedure for the Prevention of Infection, After Cataract Extraction. Walter R. Parker.
94 The Value of Conservative Operations on the Uterus and Its Appendages. W. P. Manton.
95 The Removal of the Appendix During Abdominal Section J. H. Carstens.
96 Rectal Examination; Its Importance and Value in General Practice. Louis J. Hirschman.
97 Disorders from Eye Strain. Ovidus A. Griffin.

93. **Cataract Extraction.**—Parker describes a case in which he operated successfully, protecting the cornea by conjunctival flaps, according to the method described by Ellett (abstracted in THE JOURNAL of vol. xl, ¶58, p. 1400), everting the flaps over the cornea in order to prevent infection. He thinks it is a valuable method not only for protection against infection but also against accidents in the nervous and insane.

International Journal of Surgery, New York.

September.

98 *The Differential Diagnosis of Acute and Chronic Brain Abscess by Means of the Encephaloscope. Frederick Whiting
99 Sacculated Bladder. Joseph B. Bissell.
100 Cystotomy in Chronic Cystitis F. B. Dorsey.
101 The Surgical Assistant; Abdominal Operations. (Continued.) Walter M Brickner.
102 Rubber in Windowing Plaster Casts in Compound Fractures. Hugh Crouse
103 The Surgical Treatment of Nephritis: A Physician's View. William F. Waugh.

98. **The Encephaloscope.**—The treatment of brain abscess is a difficult subject and very few if any have duplicated the successful results of MacEwen. It is dangerous to introduce

gauze into the abscess, the walls of which are especially delicate. Whiting has devised an encephaloscope, consisting of a hollow metal tube with flaring orifice and slightly contracted extremity, very similar to an enlarged type of ear speculum. Into this tube an obturator fits in such a way as to accurately occlude the extremity and preclude the possibility of laceration of the soft brain substance which must be displaced or thrust aside when the instrument is introduced into the abscess cavity. This obturator can be quickly withdrawn or speedily replaced should circumstances require. He describes the appearances in acute and chronic brain abscess. In the former there is simply a space with pinkish or reddish walls, with here and there thin shreds of plastic lymph, but nowhere any appearance of an investing layer. Chronic abscess, on the other hand, has a marked yellowish white opaque capsule distorted and irregular in shape and dense in structure. When the examiner looks through the encephaloscope, the interior of which is illuminated by a head mirror, he notices that the collapsing walls come in contact with one another, except where there is a slight depression which, of course, corresponds to the situation and direction of the drainage path. If this lies in the center of the field of observation the obturator can be replaced into the tube and the instrument carried one-half an inch deeper into the brain and straight forward. If it does not correspond with the center of the field, but is situated below the center, to the right, left or above, it is inclined in the direction corresponding to the depression and is carried by gradual stages and repeated observation until the bottom of the pus sac is reached. For acute brain abscess he would adopt an entirely different plan from that with chronic abscess. He would simply introduce to the bottom of the cavity a single wick of iodoform gauze the size of a crow quill, the dressing to be changed at intervals of forty-eight hours until the surface exposed to view is seen to be covered by pinkish granulations. Then the length of the drain should be reduced and the depths of the abscess permitted to heal, preliminary to complete closure of the canal from the dura inward. In chronic brain abscess where there is a dense, firmly-resisting, fibrinoplastic membrane which must slough away or undergo absorption, he would mop the cavity clean with sterile cotton and introduce sufficient iodoform gauze to distend or balloon it, which must be kept up until all fetor disappears and the former lymph-coated suppurating surface is covered with small, red granulations. With the appearance of these granulations favorable and speedy healing may be anticipated. He thinks curetting of a chronic brain abscess cavity might be done with great care, and when large tufts of necrotic granulations are seen they might be scraped away so that they will not conceal a path of infection extending into the adjoining brain tissue. His experience with brain abscess comprises 8 cases, 3 treated without the encephaloscope with gauze packing with or without irrigation. There was 1 recovery. With the encephaloscope he has had 5 cases and treated them all with gauze packing without irrigation with 1 death. This change of mortality from 66 per cent. to 20 per cent. is, he thinks, decidedly in favor of the instrument so far as his experience goes.

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Journal of Advanced Therapeutics, New York.

October.

155 The Current: Its Effects and Physiologic Action. Margaret A. Cleaves.

156 The Roentgen Ray as an Aid in Diagnosis. Herman Grad.
157 The Treatment of Chronic Diseases by Physical Therapeutics, Through the Sympathetic Nervous System. (Continued.) Albert C. Geyser.
158 The Vis Medicatrix Naturæ. Maurice F. Pilgrim.

Southern Practitioner, Nashville, Tenn.

October.

159 The Treatment of Pelvic Inflammation. John A. Gaines.
160 Cases in Practice: Dystocia, with Lacerated Perineum; Hemorrhoids, and Abortion. T. J. Happel.

Medical Mirror, St. Louis.

September.

161 The Treatment of Burns. Edward Wallace Lee.
162 Formaldehyd. J. W. Wainwright.
163 Consolation. William C. Cooper.

Toledo Medical and Surgical Reporter.

October.

164 The Indispensable Importance of the X-Ray. John F. Wright.
165 The Hematology of Syphilis. R. C. Longfellow.
166 History of a Case of Quadruplets. Christian Storz.
167 Interstitial Nephritis. William F. Waugh.
168 The Relation of Physical Defects to Mental Development. George Stockton.

Texas Medical News, Austin.

September.

169 The Dangers of Tuberculosis. D. Monroe.
170 Tonsillitis. A. Nowlin.
171 Some Work on the Head. R. E. B. Bledsoe.
172 Maternal Impressions; Report of a Case. S. S. Watson.
173 *The American Medical Association Plan of Reorganization. James H. Bell.

173.—See also title 153 above.

Columbus Medical Journal.

September.

174 Water-Borne Diseases. John H. J. Upham.
175 Chemical Analyses of the Present Public Water Supply of the City of Columbus, Ohio. Elmer G. Horton.
176 Bacteriologic Analysis of Present Water Supply. H. C. Fraker.
177 What Is Our Present Water Supply? Supt. O'Shaughnessy.
178 Theory and Efficiency of Filtration. R. Winthrop Pratt
179 What Should the Physicians Advise as to the Use of Hydrant Water? J. W Clemmer.
180 The Development of Obstetric Surgery. (Continued.) James U. Barnhill.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

October 3.

1 Reverence and Hopefulness in Medicine. Dyce Duckworth.
2 The Relationship of the Military Medical Service to the Civil Profession. V. Warren Low.
3 The Relation of Dental Hygiene to the General Hospital. William Hern.
4 The Trend of Opinion in Obstetrics. William Stephenson.
5 *Discussion on the Management of Pregnancy Complicated with Uterine Fibroids Amand Routh and others.
6 A Case of Persistence of the Urogenital Sinus, with Especial Reference to the Later Theories of the Mode of Development of the Female Genital Tract. C. E. Purslow.
7 *Some Remarks on the Maternal Circulation in Pregnancy. H. Oliphant Nicholson.
8 Clinical Study of Internal Hemorrhage in Association with Ectopic Pregnancy. James Oliver.
9 Two Successful Cases of Cesarean Section for Contracted Pelvis in Dwarfs. Ewen J. Maclean.
10 A Case of Hairpin in the Uterus, Discovered by the X-Rays. Arthur H. N. Lewers.
11 *A Discussion on Alcohol in Relation to Mental Disorders. Theo. B. Hyslop and others.
12 *Human Evolution, with Special Reference to Alcohol. G. Archdall Reid and others.
13 *Preliminary Note on the Action of the Blood Serum from Cases of Mental Diseases on *B. Coli Communis.* A. V. Johnson and E. Goodall.
14 *The Nature of Fragilitas Ossium in the Insane. W. Maule Smith.
15 *Some Slighter Forms of Mental Defect in Children and Their Treatment. G. E. Shuttleworth.
16 The Classification of Insanity. Charles Mercier.
17 A Discussion on the Cure and Treatment of Incipient Insanity. David Yellowlees and others.
18 Psycho-therapeutics. A. T. Schofield.

5.—This was abstracted in THE JOURNAL, September 5, p. 625.

7. **Maternal Circulation in Pregnancy.**—Certain normal changes occur in the blood during pregnancy; it is increased and more dilute. Nicholson, however, notes certain abnormal conditions. With the hypertrophy of the heart that occurs, especially of the right side, showing itself by pulsation in the jugular vein, there is still likely to be some overstrain; if the normal heart is dilated in pregnancy the arterial pulsation does not always show it, and this form may often be found in a woman who exhibits large pulsations in her jugular. The type of the radial pulse is quite consistent with the left ventricular hypertrophy, and yet other evidence points to dilatation of the right heart. He thinks the explanation is not a simple one. There are possibly toxic influences of some sort at work. The peripheral resistance is often increased and the protective action of the cardiac and vascular reflexes are interfered with. He thinks it is not improbable that some powerful and universal vasoconstrictor is generated during pregnancy; something which produces similar effects to those of suprarenal secretion and at other times the thyroid action seems to be increased. One or the other of thyroid or suprarenal secretions seem at times to gain the upper hand and patients that have a decided increase of blood pressure without edema, or only a firm or solid one, have no tendency to postpartum hemorrhage, but are likely to develop eclampsia and the arterioles must be relaxed. Thyroid extract, he thinks, is the ideal vasodilator for this purpose, and for an emergency a full grain of morphin hypodermically is the proper treatment.

11. **Alcohol.**—Hyslop considers that alcohol always has an evil action in healthy individuals, though it may be used wisely in times of need as a stimulant, nutrient and antipyretic. Stimulating a worn-out machine, however, by improper fuel is not productive of good results. He makes a comparison with financial conditions and claims that alcohol is only useful as a loan to avert physical bankruptcy. It may help to tide over a bodily crisis until the organism can repay the loan with its accumulated interest. The action of alcohol on the nervous element is noted, as also the changes in alcoholic insanity.

12. **Alcohol and Human Evolution.**—Reid reiterates his opinion as to the effect of alcohol in weeding out the unfit and thus acting as a decided factor in human evolution. In the discussion that followed Mercier, Yellowlees, Kelynack, Edridge-Green, Schofield, Ridge, Ford Robertson, Lloyd Andriezen and other prominent alienists and neurologists handled Reid's theory pretty severely.

13. **Blood Serum in Insanity.**—Johnson and Goodall have experimented to ascertain the effect of the action of blood serum in the different forms of insanity on cultures from mixed strains of *B. coli communis* in order to find whether by the determination of agglutinins direct evidence can be adduced of the morbid influence of the colon bacillus in such cases or the indirect evidence of similar action on the heart of other organisms related to the colon bacillus. Twenty-five cases of insanity of various kinds were tested; good agglutination was shown in 4 out of 5 cases of acute melancholia; 1 out of 3 cases of general paralysis; 1 out of 2 cases of delusional insanity, and 1 case of climacteric insanity. Partial agglutination appeared in 6 out of 11 cases of acute mania; 1 out of 2 cases of delusional insanity; 1 case of alcoholic insanity. No agglutination occurred in 5 cases of mania, 1 of melancholia, 1 of puerperal insanity, 2 of general paralysis and 1 case of recurrent mania. Agglutination, therefore, was present in 60 per cent. of all cases; in 28 per cent. good, in 30 per cent. partial. With control experiments, which were made each time, only one showed a slight partial agglutination. The authors have also followed the method of Bruce in counting the number of leucocytes in various cases of insanity at regular intervals over a definite period of time, and they find the leucocytes were in much greater numbers during the acute stages, falling again in remissions and cases of recovery. They were mostly of the polymorphonuclear type. The highest number occurred in acute mania.

14. **Fragilitas Ossium in the Insane.**—Smith has studied the conditions of patients as regards the breaking strain of their ribs in 200 cases from the postmortem records in the Wakefield Asylum. The forms of insanity in which the fragility was most marked were chiefly paresis and dementia; only 1 case of melancholia, and none of mania, under forty-four,

gauze into the abscess, the walls of which are especially delicate. Whiting has devised an encephaloscope, consisting of a hollow metal tube with flaring orifice and slightly contracted extremity, very similar to an enlarged type of ear speculum. Into this tube an obturator fits in such a way as to accurately occlude the extremity and preclude the possibility of laceration of the soft brain substance which must be displaced or thrust aside when the instrument is introduced into the abscess cavity. This obturator can be quickly withdrawn or speedily replaced should circumstances require. He describes the appearances in acute and chronic brain abscess. In the former there is simply a space with pinkish or reddish walls, with here and there thin shreds of plastic lymph, but nowhere any appearance of an investing layer. Chronic abscess, on the other hand, has a marked yellowish white opaque capsule distorted and irregular in shape and dense in structure. When the examiner looks through the encephaloscope, the interior of which is illuminated by a head mirror, he notices that the collapsing walls come in contact with one another, except where there is a slight depression which, of course, corresponds to the situation and direction of the drainage path. If this lies in the center of the field of observation the obturator can be replaced into the tube and the instrument carried one-half an inch deeper into the brain and straight forward. If it does not correspond with the center of the field, but is situated below the center, to the right, left or above, it is inclined in the direction corresponding to the depression and is carried by gradual stages and repeated observation until the bottom of the pus sac is reached. For acute brain abscess he would adopt an entirely different plan from that with chronic abscess. He would simply introduce to the bottom of the cavity a single wick of iodoform gauze the size of a crow quill, the dressing to be changed at intervals of forty-eight hours until the surface exposed to view is seen to be covered by pinkish granulations. Then the length of the drain should be reduced and the depths of the abscess permitted to heal, preliminary to complete closure of the canal from the dura inward. In chronic brain abscess where there is a dense, firmly-resisting, fibrinoplastic membrane which must slough away or undergo absorption, he would mop the cavity clean with sterile cotton and introduce sufficient iodoform gauze to distend or balloon it, which must be kept up until all fetor disappears and the former lymph-coated suppurating surface is covered with small, red granulations. With the appearance of these granulations favorable and speedy healing may be anticipated. He thinks curetting of a chronic brain abscess cavity might be done with great care, and when large tufts of necrotic granulations are seen they might be scraped away so that they will not conceal a path of infection extending into the adjoining brain tissue. His experience with brain abscess comprises 8 cases, 3 treated without the encephaloscope with gauze packing with or without irrigation. There was 1 recovery. With the encephaloscope he has had 5 cases and treated them all with gauze packing without irrigation with 1 death. This change of mortality from 66 per cent. to 20 per cent. is, he thinks, decidedly in favor of the instrument so far as his experience goes.

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type, infantile cholera, follicular enteritis, acute enterocolitis with severe symptoms (Hutinel's "dry cholera"), or a chronic gastro-enteritis. Symptoms on the part of the stomach are frequent and severe, as also buccopharyngeal lesions. Secondary bronchopulmonary affections are more frequent in the hospital than in general practice. Nephritis and cystitis may also occur, with erythemata, and meningeal symptoms are not infrequent. Other complications that have been observed are peritonitis, pleurisy, pericarditis, icterus and otitis. None of these manifestations are pathognomonic of the underlying streptococcus intestinal affection, and the lesions induced are not specific, although the streptococci seem to have a special predilection for the follicular apparatus.

Semaine Medicale, Paris.

42 (No. 38.) *Etude expérimentale de l'action des solutions de chlorure de sodium sur l'épithelium rénal. J. Castaigne and F. Rathery.
43 La legislation antialcoolique de l'état d'Iowa. F. Munch.
44 (No. 39.) *De l'origine des néoplasmes malins. F. de Quervain.

42. **Experimental Study of Action of Sodium Chlorid on Kidney Epithelium.**—Castaigne and Rathery have been experimenting *in vitro* with saline solutions of varying density and found that all solutions above and below a specific gravity of .78 C. were distinctly injurious to rabbit kidney tissue, actually dissolving it. The salt solution is not *per se* nephrolytic, but the osmosis must be identical with that prevailing in the kidney tissue. They then studied the effect on the rabbit organism of deprivation of salt and supersaturation. They have become convinced that the salt solution which filters through the glomeruli has a constant osmotic tension in physiologic conditions, similar to what has been established in regard to the blood and cerebrospinal fluid. When the kidney is sound, as more or less salt is ingested and eliminated through the kidney, more or less water comes with the salt, thus maintaining the constant specific gravity unless the intake is unusually large. The glomeruli are protecting filters which spare the renal tissue from the nephrolytic effect of a too concentrated or too diluted saline solution. The kidney tissue is protected against the effect of an injurious saline solution by the special arrangement of the protoplasm which these writers call the "brush border"—*bordure en brosse.* This border disappears in epithelial nephritis and the loss of this protecting device renders the kidney more sensitive to the variations in the osmotic tension of the fluid issuing from the glomeruli. Briefly transient variations pass without causing disturbance on account of this protecting device, but when the kidney tissue is diseased, variations in the osmotic tension entail severe injury. Lesions were found in the kidneys in every cadaver in which polyuria was known to have existed during life, and lesions were found in the rabbits every time polyuria had been experimentally induced for a certain length of time. Albuminuria developed invariably in the animals deprived of salt, and it also appeared in a subject placed on a salt-free diet who had previously shown no evidence of renal derangement. On the other hand, deprivation of salt had an unmistakably favorable action on a number of patients with pronounced nephritis, considerable edema and albuminuria. Salt administered to rabbits in small amounts did not induce albuminuria, but when continued beyond a certain limit, or larger amounts were given, albumin appeared in the urine in every instance, whether the salt was injected or ingested per os. The effects were more marked as the kidneys of the animals were more inclined to be diseased. Injections of salt solution so small as to cause no appreciable effects in healthy animals produced serious and sometimes fatal manifestations on the part of the kidneys in animals already affected with kidney lesions. Clinical experience to date has shown that in subjects with interstitial nephritis without albuminuria or a specially fragile epithelium, the alimentary salt test causes merely transient albuminuria. In subjects with Bright's disease and edema, the alimentary salt test continued for several days increases the albuminuria and the edema. Fatal uremic manifestations have been observed after infusion of large amounts of artificial serum in patients with slow, atrophying nephritis.

44. **Origin of Malignant Neoplasms.**—De Quervain reviews the wealth of literature published on this subject of late, and remarks that the assumption of a parasitic origin for cancer far from settling all difficulties raises a host of new problems. He thinks that the various explanations of the origin of these neoplasms offered to date are none of them sufficient, and that further research along all lines is required. He suggests that the prospects are brighter for this research in the line of the transmission of cancer from animal to animal. The first question to be solved is whether the cancer is transmissible by the cancer juice alone, strictly excluding all the cancer cells. As we learn the true nature of the transmitting virus, the study of the subject will be facilitated. He adds that in any event further researches must be conducted with the application of critical judgment which seems to have been lacking in much of the experimental work that has been done, which has resulted in parasite discoveries as numerous as the parasites have proved ephemeral.

Archiv f. Gynäkologie, Berlin.

Last indexed page 885.

45 (LXIX, No. 2.) *Syphilitic Changes in Umbilical Cord. J. Bondi (Vienna).—Die syph. Veränderungen der Nabelschnur.
46 *Zur Therapie der Geburt beim engen Becken (delivery with contracted pelvis). B. Wolff.
47 *Obstetric Statistics. C. J. Bucura.—Wochenbett-Statistik.
48 Zur Kenntnis der Adenomyome des Uterus. O. Nebesky.
49 *Spreading of Carcinoma in Parametrium. R. Kundrat (Wertheim's clinic, Vienna).—Ueber die Ausbreitung des Karzinoms im parametranen Gewebe bei Krebs des Collum uteri.
50 *Ueber Hyperemesis gravidarum mit Aufstellung einer neuen Intoxikations-Theorie vom Wesen der Krankheit. C. Behm (Berlin).
51 *Ueber die Bedeutung des Lig. rotundum uteri bei Herniotomien. F. Kayser (Gusserow's clinic, Berlin).

45. **Syphilitic Changes in Cord.**—Bondi found arteritis or phlebitis in the umbilical cord in 15 out of 31 cases of certain syphilis and 4 other probable cases. The process was always inflammatory with exudation. In 100 other cases, free from any taint of syphilis, no evidences of inflammation could be detected in the cord.

46. **Delivery with Contracted Pelvis.**—Wolff states that there have been 581 cases of delivery with contracted pelves during the last ten years at the Berlin Charité. In 297 the conjugata vera was 9.75 cm. or less in diameter and birth occurred with head presenting. In 99 it proceeded spontaneously, and in 161, forceps were applied; high forceps in 71 cases, 14 times ineffectually. In 51 the head had to be perforated. Prophylactic version and high forceps are valuable aids for reducing fetal mortality, but craniotomy is still indicated in certain cases. One of the patients was a woman with a conj. vera of 7.5 cm. who was delivered twelve times in the clinic. Four times craniotomy was necessary with head presentation; seven times delivery was accomplished by version and extraction. Four of the children were delivered alive.

47. **Obstetric Statistics.**—Bucura states that the total puerperal mortality in Chrobak's service among the 23,639 maternity cases for the last seven years has been 2.79 per cent. As there are from 8 to 18 births a day and only one bath tub in the receiving room the full bath has been supplanted by washing the patient with running water as she lies in a shallow tub, cleansing the external genitalia with 1 per 1,000 sublimate, never douching the vagina in healthy women. In 6,505 non-operative births, morbidity was 10.05 per cent., and mortality 1.2 per 1,000. In 161 operative cases the morbidity was 27.3 per cent. and the mortality 35.6 per 1,000. The morbidity of those examined and operated on in the clinic was 23.02 per cent. and the mortality 16.45 per 1,000, while those who had been examined before entering the clinic showed a morbidity of 32.3 per cent. and mortality of 56.1 per 1,000. Stroganoff was the first to insist on the advantages of bathing the woman under running water instead of in a full bath, and thinks that this is the cause of the reduction of his morbidity from 15 to 7 per cent. Bucura's article fills thirty-four pages.

49. **Spreading of Carcinoma of Cervix.**—Kundrat found the parametrium involved in 44 out of 80 cases in which the uterus had been removed on account of carcinoma of the collum. The connective tissue between the parametrium and the regional

lymphatic glands and the lymph passages in the connective tissue were always found intact even when the regional lymphatic glands themselves were carcinomatous. He examined 21,000 sections under the microscope and gives the particulars of the 80 cases. In 22 the parametrium was intact, and in 8 the glands were invaded while the parametrium was intact; in 18 both were involved. In only 2 were the lymphatic vessels carcinomatous.

50. **Hyperemesis Gravidarum.**—Behm suggests that this condition may be due to intoxication of the maternal blood, proceeding from the periphery of the ovum, probably of a syncytial nature. He treated 6 cases on this assumption, flushing the rectum with .6 per cent. salt solution at 28 to 30 C., using four to six quarts a day. Two were severe cases and all recovered with such promptness as to confirm him in this assumption of intoxication and relief by flushing the system.

51. **Round Ligament in Herniotomies.**—Kayser found that previously unknown retroflexion has developed after radical operations for hernia. He thinks that injury of the round ligament may have something to do with the retroflexion, and consequently advises isolating and fastening this ligament in the abdominal ring when operating for an inguinal hernia on a female subject, being careful not to shorten the ligament.

Archiv f. klinische Chirurgie, Berlin.

Last indexed page 886.

52 (LXX, No. 4.) Fetal Bone Affections. A. Silberstein.—Zur Lehre von den fötalen Knochenerkrankungen.
53 *Simple Inflammatory Strictures of Large Intestine. J. Koch. —Ueber einfache entzündliche Strikturen des Dickdarms.
54 *Internal Obstruction of Intestines. W. Philipowicz.—Ueber inneren Darmverschluss mit bes. Berücksichtigung des Volvulus der Flexura sigmoidea. (Concluded.)
55 Origin of Hygroma. O. Langemak.—Die Entstehung der Hygrome.
56 Ganglia of Palm. Franz.—Ueber Ganglien in der Hohlhand.
57 Zur Kasuistik der Thrombose und Embolie der Mesenterial-Gefässe (vessels). C. Falkenburg.
58 *Hacker's Method of Treating Fistula. F. König.—Ueber Einstülpungsmethoden bei der Operation der Fistula colli congenita und die gelegentliche Anwendung bei einer Mastdarm-Fistel.
59 *Hare Lip. T. Haymann.—Amniogene und erbliche Hasenscharten.
60 Das neue Operations-Haus zu Altona, eine moderne chirurgische Arbeitsstätte. F. König.
61 Genuine Cysts in Long Bones. C. Beck (New York).—Ueber echte Cysten der langen Knochen.

53. **Simple Inflammatory Strictures of Large Intestine.**—One of the 3 cases described simulated carcinoma, but proved to be a cicatricial stricture resulting from a diffuse ulceration of the mucosa of the colon of unknown origin. In another case there had been suppuration in a false diverticulum with secondary stenosis of the flexure. The third case was consecutive to appendicitis. The symptoms had simulated a tuberculous intestinal trouble. The patient recovered after resection of the lesion.

54. **Intestinal Occlusion.**—Philipowicz noted volvulus of the sigmoid flexure in a third of his 98 cases of ileus observed at Czernovitz. The disturbances were due more to the strangulation induced than to the torsion *per se.* Torsion of 180 degrees was liable to cause greater disturbance if tight, than in other cases with torsion of 360 degrees. The latter was tolerated for days by certain patients without serious injury of the intestines when the strangulation was not pronounced. In 5 patients he was able to reduce the torsion by inserting the rectum tube without operative intervention. In others he succeeded in evacuating the contents of the twisted loop by this means, but the flexure became redistended, showing that the torsion still persisted and an operation became necessary. On account of the liability to recurrence he always fastens the loop after reducing the torsion so that it can not occur again. He reviews his extensive experience with ileus in detail, tabulating the cases in twelve groups.

58. **Technic of Treating Congenital Fistula of Neck.**—Kocher believes that Hacker's method of turning the end of the fistula wall over inside like the finger of a glove, and suturing the mucosa above it, is not applicable to every case on account of the difficulty of mobilizing the walls of the fistula sufficiently for the purpose. He recommends another method which is applicable to all cases. The fistula walls are mobilized as much as possible, then a large sound is inserted in the outer opening of the fistula and pushed in until it protrudes in the mouth pushing up the mucosa in front of the lower front edge of the tonsil. The mucosa is then incised. Then the lower end of the fistula opening is fastened to the sound and drawn through with the latter into the mouth where it is sutured and cut off short. Nothing is left then of the fistula except a short open passage under the mucosa of the mouth, passing around the tonsil, both ends opening into the mouth. He found Hacker's method useful in obliterating an incomplete internal anal fissure resulting from an abscess due to actinomycosis. He mobilized and drew out into the rectum the head of the fistula, then turned it back inside the fistula, and sutured the rectal mucosa over it. The article is illustrated.

59. **Origin of Hare-Lip.**—Haymann found the hand of the fetus in the cleft in a case described, held there by an amniotic cord formation. The child presented several other deformities. After going over the subject carefully he thinks that we have no ground for assuming an amniogenic origin for hare-lip. He also reviews the heredity of such deformities. He found heredity noted in 20 per cent. of 244 cases on record. In one family hare-lip recurred through four generations.

Beiträge zur klin. Chirurgie, Tübingen.

Last indexed page 887.

62 (XXXVIII, No. 3.) *Injuries of the Skull and Fate of the Injured. H. Brun.—Der Schädelverletzte und seine Schicksale. (Commenced in No. 1.)
63 *Beiträge zur Genese, Pathologie und Diagnose der Dermoid-Cysten und Teratome im Mediastinum anticum. B. Dangschat (Garré's clinic, Königsberg).
64 Embolie und Thrombose der Mesenterial-Gefässe, Vorkommen und diagnostische Bedeutung der Purpura hemorrhagica bei der Embolie der Art. meseraica. L. Talke (ibid.).
65 Plastics of Face. H. Schloffer (Prague).—Gesichtsplastik mit Wangenverschiebung unter temporärer Aufklappung der knorpeligen Nase.
66 *Articulated Plaster Cast. V. Lieblein (ibid.).—Ueber den artikulierten Gipsverband und seine Anwendung zur Behandlung angeborener und erworbener Deformitäten.
67 *Injuries of Tongue Shaped Process of Upper Tibial Epiphysis. C. Schlatter (Zurich).—Verletzungen des schnabelformigen Fortsatzes der oberen Tibia-Epiphyse.
68 Recovery After Operation for Traumatic Hernia of Diaphragm. O. Riegner (Breslau).—Eine traumatische Zwerchfellhernie.

62. **Injuries of the Skull and Fate of the Injured.**—Brun's article is completed in this number. It contains 200 cuts and is a most exhaustive study of the subject from every point of view, based on 404 cases observed at Krönlein's clinic at Zurich. The primary and secondary disturbances are particularly noted, as well as the symptoms of apathy, disturbances in memory, vertigo and headache. The literature on the subject is also extensively reviewed. The cases are classified and each group is studied separately.

63. **Dermoid Cysts and Teratomata in the Mediastinum.**—Dangschat has observed 2 cases and reviews 42 others he has found in the literature. Without operation the prognosis is absolutely bad. Only 13 out of the 44 were operated on and total extirpation of the cyst was possible only once. In 3 cases the fatal termination followed soon after the intervention; in one instance it was due to hemorrhage from the mammary vein. When extirpation is not possible, the cyst should be evacuated and sutured to the skin. In 19 cases symptoms of the tumor had been noticed for two to several years. The growth is much slower than that of malignant tumors, and the latter seldom appear before the age of 30, while these tumors usually make their presence known before this age. Out of 29 cases pains in the thorax had been noted in 9, and in the shoulder, head and ear in 3. Difficulty in breathing was the most frequent symptom and sometimes the only one for years. One patient had been troubled with this symptom for 44 years, dying at 60 from the progress of the lesion. Discovery of hair in the sputum is the only pathognomonic sign. It was found early in 3 cases. In 2 there were no symptoms of any kind.

66. **Articulated Plaster Casts.**—Lieblein urges more general use of hinged plaster casts for the treatment of congenital and acquired deformities. He considers them indispensable for the treatment of club-foot, especially in adults. He describes the technic of making and applying them and gives radiograms of the progress attained.

67. **Injuries of Tongue-Shaped Process of Upper Tibial Epiphysis.**—Schlatter gives radiograms of 7 cases in which this process was injured in male subjects, all but one affecting the right side. The pain on pressure is typical. An immobilizing dressing with early massage of the muscles of the thigh will aid in the cure.

Centralblatt f. Bakteriologie, Jena.

Last indexed page 888.

69 (XXXIV, No. 1.) *Zur [illegible] einiger pathogener Bakterien-Arten.
70 *To Test Agglutination [illegible] A. Köppen (Norden).—Methode für die Agglutinationsprüfung der Tub.-Bac.
71 Anaërobic Bacteria in Intestinal Affections. A. Rodella.—Zur Frage der Bedeutung anaerober Bakterien bei Darmkrankheiten.
72 *Bacteriology of Pneumonia During Whooping Cough. G. Jochmann and Moltrecht.—20 Fälle Broncho-Pneumonie bei Keuchhusten-Kindern hervergerufen durch ein influenzaähnliches Stäbchen.
73 *Yeast in Experimental Infections. R. Turro and others (Cataluna).—Die Bier-Hefe bei exp. erzeugter Streptokokken- und Staphylokokken-Infektion.
74 Zur Kenntniss einiger Trematoden. L. Cohn.
75 Neuer Fall von Dipylidium caninum beim Menschen. F. Zschokke (Basle). (Thirty-fourth case in man on record.)
76 Zur Agglutination der Staphylokokken. R. Otto.
78 Weitere Studien über das Lakto-Serum. P. T. Müller (Graz).
79 Zur Theorie der bakteriolytischen Immunität. R. Pfeiffer and E. Friedberger.
80 Einige Hände-Desinfektions-Versuche. Engels (Marburg).

69. **To Differentiate Bacteria.**—Onelianski describes a new culture medium made of phenolphthalein, sodium formate and agar. The bacteria stain differently on this medium and it is possible to differentiate readily the colon, typhoid, diphtheria and pseudodiphtheria germs.

70. **To Test Agglutination of Tubercle Bacilli.**—Köppen treats the bacilli with caustic potash solution, thus saponifying them. The stem fluid he uses for the agglutination is milky and homogeneous and does not become putrid, thus not requiring an antiseptic ingredient. After this saponification the tubercle bacilli take the stain as readily as before.

72. **Bacteriology of Whooping Cough.**—Jochmann found the *Bacillus pertussis* (Eppendorf) in 20 cases of pneumonia complicating whooping cough. As this bacterium is so similar to the influenza bacillus, he suggests that attention had better be paid to the presence of cases of influenza in the environment of children with whooping cough.

73. **Yeast in Experimental Infections.**—Turro found that yeast had an unmistakably favorable effect in cases of experimental streptococcus infection in rabbits, both local and general. He asserts that it was possible to confer temporary immunity to both streptococcus and staphylococcus infection by subcutaneous injection of the yeast.

Centralblatt f. Chirurgie, Leipsic.

81 (XXX, No. 39.) *Ogston's Operation for Club-Foot. C. Lauenstein (Hamburg).—Zu Ogston's Operation des rebellischen Klumpfusses.

81. **Club-Foot.**—Lauenstein advocates Ogston's method of enucleating the bony kernel. He finds it is easily performed but should be preceded by an *x*-ray examination. What bones are to be operated on must be determined by the operator in each individual case. It is not specially important whether the wounds of the soft part are sutured after operation or not, if sufficient portions of the bony kernel have been removed. The remedying of the condition is very easy and complete. Besides the equinus and varus types any inward bending of the foot is easily relieved. The after-treatment is notably shortened and the danger of disturbance to the growth of the foot is not to be dreaded. (The technic of Ogston's operation was described in THE JOURNAL, xxxix, p. 110, 1902.)

Centralblatt f. Gynäkologie, Leipsic.

82 (XXVII, No. 39.) Sectio cesarea und Total-Extirpation des Uterus wegen Myom, ausgführt im Januar, 1894, Heilung. K. G. Lennander (Upsala).
83 *Ein Ligamentum suspensorium fundale medium nach Ventrifixur. F. Michel.
84 *Treatment of Apparent Death of the Newly Born. W. Zangemeister.—Ueber die Behandlung des Scheintodes Neugeborener.

83. **Ligamentum Suspensorium Fundale Medium.**—Michel adopts this name proposed by Fritsch for a formation which sometimes follows ventrofixation of the uterus, viz., a fibrous cord extending between the fundus and the parietal peritoneum. In the course of years this may reach several centimeters in length, and he gives an account of a case, with illustration, where it was 15 cm. long. He remarks that such a condition may have uncomfortable results for the patient, as was the fact in the case reported, and recommends that in ventrofixation one should not make a limited attachment of the fundus to the peritoneum, but make a much more thorough fixation.

84. **Treatment of Apparent Death of the Newly-Born.**—Zangemeister remarks that the attempts to apply the inhalation of oxygen as a therapeutic measure have not been very satisfactory as a general thing, but there is one condition in which it is proving extremely valuable. This is in severe asphyxia neonatorum. The almost invariable success and the rapidity of its action, with no inconveniences, render it a most valuable aid in this emergency. He uses a thin-walled rubber bulb filled from a small portable tank of compressed oxygen. The oxygen is forced through a tracheal catheter into the infant's lungs by gentle, regular pressure on the bulb. When the lungs have become distended he applies gentle external pressure to the thorax. The air escapes along the outside of the catheter, which must be of small diameter to allow this. The lungs are then inflated again by gentle pressure on the bulb and emptied as before, and these procedures are repeated continuously as long as required. The prompt reddening of the skin shows the favorable action of the oxygen. It can be applied while the infant is in a warm bath. The narcosis from carbon dioxid is dispelled in this way more rapidly than by any other means and the stimuli applied become more promptly effectual.

Monatsschrift f. Geb. und Gynäkologie, Berlin.

Last indexed XL, page 1405.

85 (XVII, No. 5.) Causes of Increased Blood Pressure During Childbirth. H. Schroeder.—Ursachen der Blutdrucksteigerung während der Geburt.
86 *Apparent Extra-uterine Gestation in a Rabbit. K. Kamann (Greifswald).—Scheinbare Bauchträchtigkeit bei einem Kaninchen.
87 *Zur Prophylaxie der Gynatresie. L. Pincus (Dantsic).
88 *Vaginale Total-Exstirpation ohne Narkose. R. Gradenwitz (Breslau).
89 *Kastration wegen funktionierender Ovarien bei rudimentärer Entwicklung der Müller'schen Gange. Ibid.
90 *Beitrag zur Pubiotomie nach Gigli. P. Baumm (Breslau).

86. **Apparent Extra-uterine Gestation in a Rabbit.**—In Kamann's rabbit the placenta was found attached to the greater omentum with a long twisted pedicle of omentum tissue and vessels. He considered it a case of abdominal gestation and as such exhibited the specimen at his local medical society. Further investigation, however, revealed a cicatrix in the wall of the uterus and evidences that the uterus had been the original seat of the fetus but that the latter had escaped into the abdominal cavity in consequence of rupture of the uterus, still enclosed in its intact membranes, and that a connection between the latter and the omentum had occurred secondarily.

87. **Prophylaxis of Gynatresia.**—Pincus thinks that the vagina may become obliterated or obstructed in consequence of gonorrheal infection during birth or during other severe infections later in which the vaginal mucosa may share in the inflammation. He advocates systematic investigation of the permeability of the vagina in new-born infants. It can be done with the sound in the absence of gonorrhea, and in case of the latter infection the vulva and vagina should be appropriately treated. The pains and tempestuous onset of menstruation in case of gynatresia may entail a severe shock to the nervous system. He adds that it is important to instruct growing girls approaching menstruation and to inquire after children's diseases in persisting amenorrhea. In molimina with vicarious hemorrhage and in case of preceding severe disease, he urges careful examination for possible gynatresia. Stagnating blood may prove a culture medium for germs and the source of virulent infection later.

88. **Vaginal Pan-Hysterectomy Without Narcosis.**—Gradenwitz reports 3 cases of total extirpation without narcosis. One was on account of retroflexio with obstinate hemorrhage, phthisis and anemia; another for total prolapse of the uterus and vagina in a subject with a large struma, and the third

117. Alkalinity of Blood in Leucocytosis and Infections.—Orlovsky's comprehensive researches on dogs and human beings, sick and well, all resulted negatively, confirming his previous announcements that the alkalinity of the blood is not proportionate to the number of white corpuscles, but is an almost constant phenomenon through the most diverse conditions, varying very slightly from normal at any time. The only exceptions to this rule are in advanced stages of cachexia from cancer, uremia or diabetes. The blood retains its normal alkalinity during infections until they become very virulent, when it gradually declines, usually an almost agonal phenomenon.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY. For Practitioners and Students. A Complete Dictionary of the Terms Used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry and the Kindred Branches, Including Much Collateral Information of an Encyclopedic Character, Together with New and Elaborate Tables of Arteries, Muscles, Nerves, Veins, etc.; of Bacilli, Bacteria, Micrococci, Streptococci; Eponymic Tables of Diseases, Operations, Signs and Symptoms, Stains, Tests, Methods of Treatment, etc., etc. By W. A. Newman Dorland, A.M., M.D., Editor of the "American Pocket Medical Dictionary." Third Edition, Revised and Enlarged. Flexible Leather. Pp. 798. Price, $4.50 net; with Thumb Index, $5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

PHYSICS AND INORGANIC CHEMISTRY. A Manual for Students and Practitioners. By Alexius McGlannan, M.D., Associate Professor of Physiologic Chemistry, Instructor in Clinical Laboratory, College of Physicians and Surgeons, Baltimore, Md. Series Edited by V. C. Pedersen, A.M., M.D., Instructor in Surgery and Anesthetist and Instructor in Anesthesia at the New York Polyclinic Medical School and Hospital. Illustrated with 20 Engravings. Cloth. Pp. 216. Price, $1.00. Philadelphia and New York: Lea Brothers & Co.

A TEXT-BOOK UPON THE PATHOGENIC BACTERIA. For Students of Medicine and Physicians. By Joseph McFarland, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. Fourth Edition, Revised and Enlarged and Entirely Reset. Fully Illustrated; a Number in Colors. Cloth. Pp. 629. Price, $3.50 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

A TEXT-BOOK OF PATHOLOGY. By Alfred Stengel, M.D., Professor of Clinical Medicine in the University of Pennsylvania. With 394 Text Illustrations, Many in Colors, and 7 Full-page Colored Plates. Fourth Edition, Revised and Enlarged. Cloth. Pp. 933. Price, $5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

A TEXT-BOOK OF OBSTETRICS. By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania. With 746 Illustrations; 39 of Them in Colors. Fourth Edition, Revised and Enlarged. Cloth. Pp. 900. Price, $5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA (State Board of Health). Organized 1847. Meeting of 1903. Talladega, April 21-24. Cloth. Pp. 553. Montgomery, Ala.: Brown Printing Company. 1903.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. Army, under orders from the Adjutant-General's Office, Washington, D. C., for the week ending Saturday, Oct. 3, 1903:

Borden, William C., major and surgeon, is detailed to represent the Medical Department of the Army at the annual meeting of the Mississippi Valley Medical Association, to be held at Memphis, Tenn., October 7, 8 and 9.

Glennan, James D., major and surgeon, in addition to his present duties, is detailed as professor at the Army Medical School in Washington, D. C.

Miller, Reuben B., first lieut. and asst.-surgeon, now at San Francisco, is relieved from further duty in the Division of the Philippines, and will report to the commanding general, Department of California, for assignment to duty.

Patton, Irvine W., first lieut. and asst.-surgeon, is relieved from further duty in the Division of the Philippines and from temporary duty at the Presidio, and will proceed to Fort Hamilton for duty, to relieve First Lieut. Walter D. Webb, asst.-surgeon, who will proceed to West Point, N. Y., and report at the U. S. Military Academy for duty.

Rafferty, Ogden, major and surgeon, will proceed from San Francisco to Seattle, Wash., and make a sanitary inspection of the transport *Dix*.

Truby, Willard F., first lieut. and asst.-surgeon, will proceed to West Point, Ky., and report to Major-General J. C. Bates for duty, and, on the completion thereof, will return to his proper station.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week en Oct. 10, 1903:

Surgeon T. W. Richards, commissioned surgeon, with rank lieutenant-commander, from March 3.

Asst.-Surgeon B. L. Wright, ordered to the Naval Hosp Pensacola, Fla.

A. A. Surgeon F. A. Richardson, appointed acting assi surgeon, with rank of lieutenant, junior grade, from September

A. A. Surgeon W. N. McDonnell, ordered to the Naval Acad

Surgeon D. N. Carpenter, commissioned surgeon, with rank lieutenant-commander, from March 3.

Surgeon E. J. Grow, detached from the Naval Hospital, M Island, Cal., and ordered to the *Mohican*.

Asst.-Surgeon C. N. Fiske, detached from the *Mohican* and home to await orders.

A. A. Surgeon L. H. Schwerin, detached from the *Southery* ordered to the *Yankton*.

A. A. Surgeon J. T. Miller, detached from the Navy Yard, Island, Cal., and ordered to the Naval Hospital, Mare Island,

Pharmacist J. Cowan, detached from the Naval Magazine, I Island, N. Y., and ordered to Washington, D. C., for examinati for retirement and then home to wait orders.

Surgeon E. H. Marsteller, detached from the *Panther* and or home to wait orders.

P. A. Surgeon J. C. Thompson, ordered to additional duty the Navy Yard, Puget Sound, Washington.

P. A. Surgeon W. H. Bell, detached from the *Yankton* and c to the Navy Yard, Portsmouth, N. H., for additional duty on *Southery*.

Health Reports.

The following cases of smallpox, yellow fever, cholera and p have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Oct. 10, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, Sept. 27-Oct. 3, 3 cases.
California: Los Angeles, Sept. 20-26, 8 cases.
Illinois: Belleville, Sept. 27-Oct. 3, 3 cases.
Maine: Grant Isle, Oct. 2, 3 cases; Madawaska township, Oct. 2, 5 cases; Van Buren, Oct. 2, 2 cases.
Massachusetts: Cambridge, Sept. 27-Oct. 3, 1 case; Taunton, Sept. 27-Oct. 3, 2 cases.
Michigan: Port Huron, Sept. 27-Oct. 3, 3 cases.
Mississippi: Natchez, Sept. 20-26, 1 case.
Missouri: St. Louis, Sept. 29-Oct. 5, 1 case.
New York: Niagara Falls, Sept. 27-Oct. 3, 1 case.
Ohio: Dayton, Sept. 27-Oct. 3, 2 cases; Lorain, Sept. 27-Oct. 1 case.
Pennsylvania: Altoona, Sept. 27-Oct. 3, 4 cases, 1 death.

SMALLPOX—INSULAR.

Philippine Islands: Manila, Aug. 16-22, 1 case.

SMALLPOX—FOREIGN.

Austria-Hungary: Prague, Sept. 12-19, 3 cases.
Brazil: Rio de Janeiro, Aug. 31-Sept. 13, 124 cases, 64 deaths.
Belgium: Brussels, Sept. 12-19, 1 death.
Canada: Quebec, Sept. 27-Oct. 3. 1 case.
Chile: Antofogasta, July 25-31, 20 cases, 9 deaths.
France: Paris, Sept. 12-19, 1 death.
Great Britain: Birmingham, Sept. 12-26, 15 cases, 1 death; Glasgow, Aug. 31-Sept. 25, 1 case; Leeds, Sept. 12-26, 24 cases; Liverpool, Sept. 12-26, 6 cases, 2 deaths; London, Sept. 12-26, 8 cases, 2 deaths; Newcastle-on-Tyne, Sept. 12-19, 16 cases.
Italy: Catania, Sept. 10-17, 1 death.
Mexico: City of Mexico, Sept. 13 27, 6 cases, 3 deaths.
Netherlands: Amsterdam, Sept. 20-26, 4 cases.
Russia: Moscow, Sept. 5-12, 2 deaths.
Straits Settlements: Singapore, Aug. 16-22, 1 death.
Turkey: Constantinople, Sept. 7-20, 3 deaths; Smyrna, Sept 7-20, 118 deaths.

YELLOW FEVER—UNITED STATES.

Texas: Laredo, Sept. 28-Oct. 7, 105 cases, 2 deaths; Minera, to Oct. 3, 7 cases, 2 deaths.

YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, Aug. 31-Sept. 13, 1 case.
Colombia: Panama, Sept. 21-28, 2 cases, 1 death.
Costa Rica: Limon, Sept. 18-24, 6 cases, 5 deaths.
Mexico: Nuevo Laredo, Sept. 30, 12 cases, 9 deaths; Progres Sept. 20-27, 1 case; Vera Cruz, Sept. 20-26, 49 cases, 17 deaths
Venezuela: Maracaibo, July 5-11, 1 case, 1 death.

CHOLERA—INSULAR.

Philippine Islands: Manila, Aug. 16-22, 29 cases, 22 deat provinces, Aug. 16-22, 5,663 cases, 3,811 deaths.

CHOLERA—FOREIGN.

India: Calcutta, Aug. 29 Sept. 5, 8 deaths; Madras, Aug. 22-Sept. 5, 5 deaths.
Straits Settlements: Singapore, Aug. 8-22, 11 deaths.
Turkey: Syria, Birejik, Sept. 24, prevailing.

PLAGUE—INSULAR.

Philippine Islands: Manila, Aug. 16-22, 4 deaths.

PLAGUE—FOREIGN.

Brazil: Rio de Janeiro, Aug. 31-Sept. 13, 42 cases, 20 deaths.
Chile: Iquique, Aug. 21-28, 14 cases, 8 deaths.
Egypt: Alexandria, Aug. 29-Sept. 4, 6 cases, 4 deaths.
Japan: Yokohama, Aug. 22-29, 1 case, 1 death.
Mauritius: July 17-Sept. 3, 111 cases, 55 deaths.
Turkey: Smyrna, Sept. 29, 1 death.